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SPECIAL APPLE PACKING NUMBER

VOLUME ONE NUMBER THREE ONE DOLLAR PER YEAR

BETTER FRUIT

SEPTEMBER 1906

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INTERIOR VIEW OF APPLE PACKING HOUSE OF J. D. OLWELL, MEDFORD, OREGON

PUBLISHED BY

BETTER FRUIT PUBLISHING COMPANY

HOOD RIVER, OREGON

NIAGARA GAS SPRAYER

NIAGARA LIME *and* SULPHUR SOLUTION

THESE ARE OUR LEADERS IN A FULL LINE OF

SPRAY PUMPS, HOSE, NOZZLES, ALUMINUM RODS ETC. SPRAYS, SPRAY MATERIALS AND INSECTICIDES

WE ARE MAKING OUR BUSINESS A SPECIALTY

We first find out what the orchardist needs, then we make or get the thing to supply that need in the most effective way. Write to us; call at our office; work with us.

WE are exclusive owners of patent rights for the manufacture and sale of the NIAGARA GAS SPRAYER for Oregon, Washington, Idaho, California, Nevada and Utah.

This sprayer leads all for simplicity, economy, convenience, and, best of all, for effective work. No pump, therefore no pumping; no engine with complicated parts to get out of order; no boiler to cart around and watch, fire up and keep from blowing up. Always ready for use. We supply the gas for pressure in convenient drums.

In next issue of "Better Fruit" we will give you some more names and addresses of people who are using the Niagara. Here is what some of them say:

Hood River, Oregon, September 6, 1906.

Oregon Spray & Gas Co.,
Portland, Oregon:

Gentlemen—The Niagara Sprayer which I bought in June has given me such perfect satisfaction that **I consider it my duty to recommend it to orchardists,** and take pleasure in doing so. A year ago there was but one of these machines in use in Hood River Valley. Today there are nine, and every grower using one is satisfied. I spent two hours in looking through my orchard, and found but one worm.

I recommend it for the reason that it is never out of order, and does the work thoroughly and effectively. In addition it is the simplest and most convenient sprayer that I know of. It has saved me over half the cost of labor, and over half the material required in the ordinary way of spraying.

Yours very truly,
E. H. SHEPARD,
Manager Hood River Apple Growers' Union.
Editor of Better Fruit.

Salem, Oregon, March 9, 1906.

Mr. Theo. Dosch,
Portland, Oregon:

Dear Sir—The Niagara Gas Sprayer I purchased some time ago is giving me perfect satisfaction. I have no trouble in throwing out 1000 gallons of lime, sulphur and salt spray with a 50-pound tube of gas. I think it is the simplest, lightest and most durable spraying machine in the market, and with proper care I think it would last a lifetime, as there is no friction on any part of the machine. I can spray my orchard in one-third the time, and save at least one-fourth the material over a hand power machine, and I would recommend it to any one wishing to purchase a first-class power spraying machine.

Yours truly,
C. E. HANNA.
Salem, Oregon.

Washougal, Washington, September 7, 1906.

Oregon Spray & Gas Co.,
Portland, Oregon:

Gentlemen—In reply to yours just received will say that I operated my 100-gallon gas sprayer during the past season, having sprayed my orchard of 1200 sixteen-year-old prune trees four times.

I can mix and spray out seven tanks in ten hours easily **alone,** using four nozzles on one rod. If the nozzles ever clogged or there was any hitch or trouble with the power as there often is in other machines, one man could not do that amount of work. I carry about 130 pounds pressure, and apply the mixture in a fine mist, thus saving at least one-third on material.

Very truly yours,
L. F. RUSSELL.

WE are building a plant for the manufacture of LIME and SULPHUR SOLUTION. We will warrant this article to be a perfect solution, ready to apply (when diluted), and testing equal to any article obtainable. All orchardists recognize the value of Lime and Sulphur as a remedy for San Jose Scale.

Our Lime and Sulphur, by reason of cost, convenience and constancy of chemical proportions, insuring a perfect reaction and killing power, will compete with any home-made or other commercial article.

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OREGON SPRAY AND GAS CO.

194 FRONT STREET, CORNER TAYLOR, PORTLAND, OREGON

BETTER FRUIT

A MONTHLY ILLUSTRATED MAGAZINE PUBLISHED IN THE INTEREST OF UP-TO-DATE, PROGRESSIVE FRUIT GROWING AND MARKETING

PICKING, PACKING AND MARKETING THE APPLE

By LOWELL B. JUDSON

TIME OF PICKING

THE time of picking red apples is commonly gauged by their color, and that of yellow apples by the color of the seeds. The latter is the only reliable test of ripeness, for an apple picked just as the seeds have turned a light brown, and before they become dark around the edges, will be found to have not only full flavor, but the best keeping quality. But red apples are often left for some time after the seeds indicate maturity to allow them to put on more color, which they do rapidly under the influence of the bright days and frosty nights of autumn; and indeed this is the only way of obtaining color on fruit in the shady portions of the tree. Growers should bear in mind, however, that to defer picking after the seeds indicate ripeness, invites watercore and shortens the life of the fruit in storage, often to a serious extent with the midwinter varieties. Much of the complaint recently lodged against the Jonathan because of rotting at the core is doubtless attributable to late picking. Unless this trouble is corrected the sale of this valuable variety is sure to be hurt. The purchaser is completely deceived by the perfect appearance of the fruit, not a sign of decay being visible until it is cut open, when the flesh for some distance about the core is discovered to be brown, radiating in narrow rays toward the skin, which, however, it seldom reaches. It is worse than a worm hole, for that can be cut out. A box containing even a few of this sort of apples makes the consumer distrustful of the variety, while half or more sickens even the most enthusiastic friend of "Brother Jonathan."

DEVICES FOR PICKING

Ladders—It costs money to step on a ladder, as the orchard owner soon finds, and all that can reasonably be done by pruning to start the head of the tree low and keep it low, is a paying investment. It should be possible for several years to gather a large percentage of the crop from the ground, or with a very low ladder. Nevertheless you can scarcely make a dwarf tree by any amount of pruning, and in every apple orchard ladders of some kind soon become a necessity. Climbing about among the branches of a tree is always to be deprecated. Mr. E. H. Shepard, of Hood River, tells me that he once counted forty-three fruit spurs on the ground under one tree in which pickers had been climbing. Of all the numerous styles of ladders, some form of stepladder is best adapted to the orchard, whether the welfare of the tree is considered, or the comfort of the picker. Any ladder which must be set against the tree is a constant menace to it.

FIGURE FOUR—THE APRON PICKING BAG IN USE

Receptacles—In the matter of picking receptacles the greatest diversity prevails. Buckets, baskets and bags have each their devotees, and one man tells me he provides his pickers with coal scuttles. The latter, however, suggest pouring a little too strongly, and such rough treatment is not to be thought of, any more than with eggs. Buckets are more commonly used than baskets, largely perhaps because they are easier to obtain, but both are awkward to handle compared with bags. A lining of burlap greatly improves them, though it should not cause any relaxation of care in placing the fruit in them. Bags are open to the objection that the fruit in them is easily bruised if the bag brushes against a limb or ladder. In many styles of bags it is unhandy to remove the fruit without pouring, and to overcome this difficulty the bottomless bag has been devised, which allows the fruit to roll from the bottom when the chain is released. Such treatment might do with oranges, but with apples — never. The average picker could never withstand the temptation to stand up and let them shoot into the box the moment the foreman's back was turned. The best picking bag that has come to my notice —and I consider it superior to all baskets or buckets — is the apron bag shown in Figure 4. It is cheap, being easily made of a heavy grain sack; hangs in the most convenient position for filling, leaving both hands free; is so shallow that the first apples can be conveniently laid in it without dropping, and yet holds all the wearer can readily carry; and finally, can not be emptied by pouring unless the picker stands on his head. Give him the suggestion, as a hypnotist would do, that he is not handling apples, but eggs, and this bag will help him live up to the suggestion. Mr. Fremont Wood of Boise has used it in his

orchard with complete satisfaction, and has not observed any bruising of fruit from the rubbing of the bags against limbs or ladders.

For hauling to the packing house the fruit is usually emptied into apple boxes, and the ease of handling these can be greatly increased by having a slot for the hand cut in each end. Any box factory will slot them for a trifling sum. The slots also serve to mark off these boxes sharply from the rest, and prevent fruit being packed in them, more or less soiled as they are; some growers have boxes especially made for this purpose, one-third larger than the common size and of heavier material with ends higher than the sides stacking without danger of bruising the fruit. These boxes should be hauled to the packing house on a spring wagon; or, if the distance from the orchard to the packing house is not great, a stone-boat is admirably suited to the purpose.

FIGURE FIVE—THREE AND ONE-HALF TIER YELLOW NEWTOWNS, THE MIDDLE BOX OPENED ON SIDE

BOXES

The best available material for boxes is spruce, being whiter and neater in appearance than fir, and so soft that it does not easily split when nailed. Fir ends split easily, and at times cause considerable annoyance and loss by breaking apart while the fruit is being handled. Some dealers assert that fir will not split if it is made up while green, but those who have tried it find that it splits badly in seasoning. Single boards for tops and bottoms are somewhat neater than two, but are harder to obtain. Proper thickness of box material is as follows: Ends, three-quarters of an inch; sides, three-eighths; and top and bottom, one-quarter. Thinner ends are apt to split; thinner sides to bulge, resulting in bruising in transportation; and thicker tops not to bulge enough, hence crushing the fruit when sprung into place.

Uniformity in the size of apple boxes is unfortunately lacking, though two sizes, known as the "standard" and "special," have found general acceptance in the Pacific Northwest. The inside dimensions of the "standard" in inches are 10½x11½x18, and this is used far more than the "special," which is longer and a trifle narrower, measuring inside 10x11x20. Some growers use the "special" for 128s only, its greater length permitting it to accommodate eight tiers nicely. The "standard" box contains 2173.5 cubic inches, or slightly more than a struck bushel, and the "special" 2200 cubic inches. The bulge in the top and bottom adds about 150 cubic inches to the capacity of each. The standardizing of apple boxes is a piece of legislation much to be desired, and one that would be welcomed by every honest and progressive grower. There is nothing now but sentiment to prevent competition slyly cutting down the size of the boxes, and no legal redress for honest packers if their neighbors resort to these practices, and thus undermine the reputation the former are striving to build up. And are not the interests of the poor consumer also worth considering?

There should be a national fruit package law prescribing the standard size or sizes of apple boxes. Some growers think one size sufficient, and this would of course save much annoyance if practicable; but more are inclined to think that two are necessary. Mr. C. H. Rogers of Watsonville, California, president of the Pajaro Valley Fruit Growers Association, writes me that the growers there use one box almost exclusively (9¾x11x 20½), but that they feel the need of a different shape for the largest sized apples, and are now experimenting with boxes of various dimensions. Canadian laws, however, allow but one size, yet no serious complaints have arisen. This size, 10x11x20, was fixed only after a careful canvass of the horticultural societies and many growers showed it to be the general favorite. Mr. Maxwell Smith, Dominion Fruit Inspector at Vancouver, tells me that upon assuming duties two years ago he found no less than seven different sizes of apple boxes upon the Seattle market. This chaotic condition has doubtless improved since the enforcement of the Canadian law, but will never be completely abated until similar legal action is taken in this country.

Box shooks are usually hauled to the packing house or orchard and made up on the spot. To perform this operation rapidly make a form by nailing two cleats a foot long on the work bench just the length of a side board apart, and about seven-eighths of an inch inside each of these nail another, thus making two slots to receive the end boards. In the same manner cleat a short board and nail it on edge just back of the cleats on the bench, meeting them at right angles. End boards thrust into these slots are thus held upright while being nailed. Box cleats should always be put on bottoms as well as tops, otherwise the thin boards are very likely to split and draw over the heads of the nails when the top is pressed into place. Cleats sometimes give a good deal of annoyance by splitting while being nailed, and in such cases should be soaked in hot water a few hours previous to using. Four fourpenny nails on each end are much safer than three, both for sides and top and bottom, and cement coated or barbed nails are more reliable than the smooth. A good man can make up from 130 to 160 boxes per ten-hour day. The average cost of boxes in the flat is ten to thirteen cents apiece, but this can be reduced by ordering in carload lots. Some fruit unions obtain them of good quality as low as eight and one-half cents. The cheaper grades are frequently made of stuff so unsound that they are dear at any price.

Use only boxes that are freshly made up and material that is bright and clean. No man that takes pride in his business or cares for his reputation will pack fruit in old or soiled boxes. When hauling to market throw a tarpaulin over the load to keep off rain and dust. If box

material is carried over from one year to another, it should be carefully covered to keep it clean and bright.

PACKING HOUSES AND FITTINGS

A permanent packing house is a convenience too often dispensed with by growers, who make shift to pack in the open air where any inclement weather brings operations to a stop, and the packers are at best subjected to much discomfort from chilly mornings and evenings. The house may be cheaply made, but should have plenty of windows (which may even be covered with cloth), as the autumn days are short. A cheap but desirable construction is a lean-to against a south wall, securing the maximum of heat and light. The comfort of packers has a direct effect on the quality of the pack, and from a purely business standpoint is worth securing, even when they are working by the piece. Every large grower owes it to his business to have a well built, light, and comfortable packing house.

The packing table is the most important item among the furniture of the packing house. One which stands free from the walls is preferable to a shelf or table built against them, as the latter arrangement makes it necessary to interfere with the packer every time the table is replenished. The table should be built to hold the apples themselves, not loose boxes of them. Common as the latter fashion is, it is utterly to be condemned, for the apples are not sufficiently spread out to allow the packer to choose the size he requires, but must be continually pawed over, to the irritation of the packer and the injury of the fruit. I have visited some places where the rattling of the apples in the boxes could be heard rods away; one might almost as well run them through a fanning mill! The common tables or benches partitioned off into compartments are a shade better, though far inferior to those provided with burlap or canvas bottoms. The best style of table I know of is the one in general use at Hood River, Oregon, and illustrated in Figure 18. It accommodates two packers and allows free access to the ends for refilling. The favorite size is three by four feet, as it allows any part to be reached by either packer, and yet holds plenty of fruit—that is to say, three or four boxes. A slight examination of the picture shown (see page 10) will enable anyone to construct the table in a satisfactory manner. The full length of the legs is three feet; they come up inside the frame flush with the top, but should be sawed off on a slope inward to prevent the corners bruising the apples through the burlap. The real test of the proper height of the table is the height of the box when in position on the supports, as shown in the figure; if the packer's extended fingers just touch the lower inside corner of the box as he stands erect before it, the height is correct. Table legs three feet long usually fill these conditions. A board nailed across the end and another running across underneath serve to support the box at a convenient angle for packing. The latter board should, in addition to being nailed, be fastened with wire, or in some equally secure manner, as there is constant and often heavy pressure upon it. Commonly the box supports are arranged at diagonally opposite corners, so that each packer may have the table at his right; but, as many packers pack from the right or left indifferently, and find relief in changing about, many tables are made with three supports (as in the illustration), or four. The top of the table consists merely of burlap or canvas, which is tacked on loosely so as to leave considerable sag in the middle. It is an improvement if a double thickness of the cloth is used and the upper tacked at one end only, allowing dirt and litter easily to be shaken off. All the apples should be packed off the table about once an hour to prevent bruises wearing upon them. The danger of bruises may be lessened by edging the table with pieces of hose pipe thrust upon a stick. There are no high sides on this table to reach over, and the packer can remove the apples from its hollow as conveniently as a cashier can remove coins from the hollows of a cash till. Compare it with the table shown in Figure 22, and its superiority will be evident. The one in Figure 22 has a rim four inches high, the top being of canvas tightly stretched, since a sag would allow it to rest on the box supports which run across under the middle of the table. It is inconveniently large, being forty by eighty inches. To make it more portable it is not provided with legs, but rests on saw horses, and is equipped at each end with handles. (In the picture the handles are concealed by the lining papers which hang over them.)

FIGURE SEVEN—MANNER OF STARTING THE THREE AND ONE-HALF TIER PACK. PAPER HOD ATTACHED TO SIDE OF BOX

One more piece of furniture—the nailing press—is essential to the equipment of the packing house. There are many types of these, from the crude, clumsy affair shown in Figure 22, to the highly effective one shown in Figure 17. The press shown in Figure 22 is a simple affair, but open to the same objections as a double clamp press. Now, turning to the press in Figure 17, which is in general use at Hood River, we find all of these objections are cleverly met. The box being placed in position on the press, the cover

PERFECTLY PACKED BOXES OF APPLES

and cleats are clapped into place, and pressure on the foot lever brings all down tight ready for nailing. The first pressure on the lever brings the arms inward, thus trueing up the cover boards automatically; then, as it descends further, the arms are drawn downward, clamping boards and cleats tightly to the box. The pressure is exerted directly over the box ends, and the claws which engage the cover are so spaced as to be entirely out of the way of nailing. The plan of construction of this press is given on another page, and accompanied by a full description that should enable any grower to make one.

MANAGEMENT OF PACKERS

Few men are fit to pack their own apples, as it is too hard for them to see the worm holes. No fruit union can afford to allow members to do their own packing, and even unorganized communities would benefit greatly by employing the same body of trained packers successively at the various orchards. Even isolated growers should endeavor, if their orchards are large, to train a group of expert packers and employ the same ones as far as possible year after year. This is the way to build up a reputation that has a cash value.

The success attained by the Apple Growers Union of Hood River is so marked that it seems advisable to describe their system of handling packers. The latter are under complete control of the manager, who directs them daily where to go. When a member has picked enough apples to justify commencing packing, he notifies the office. This notice is listed with others, and packers are sent to the various places in the order of notification as nearly as practicable. It has been found very advantageous to organize the packers in crews of four, each headed by a foreman. Four packers make about the right number to handle the crop of the average grower; they just supply two tables, which are all the ordinary packing house will conveniently accommodate; and are as many as one foreman can attend to thoroughly. In some other localities only one foreman is provided for as many as a dozen packers, and too often confusion reigns. The foreman does no packing, but is kept busy seeing that every box is properly packed, and teaching and helping inexperienced packers. He sees to it that all are supplied with boxes, papers and fruit; that boxes when filled are promptly removed; and that everything goes smoothly. He stamps on the end of each box the number and name of the apples contained, and O. K.'s it with his own individual stamp. For small jobs, especially where there is room for only one to work, a single packer is detached from a crew.

The customary price for packing is five cents a box for grades larger than five tier; for the latter, and smaller grades, six cents. Under this scale of prices the apples must be placed on the tables wiped and practically free from culls. Wiping is essential where the fruit is sprayed late in the season with any mixture containing lime, not only because of the untidy appearance of the fruit, but the disagreeable suggestion to the consumer that it is poisoned. That no actual danger exists has been repeatedly demonstrated, but somehow this has not made the market very brisk for whitewashed fruit. Some who spray with arsenate of lead find wiping hardly necessary, the deposit is so light; but it is a good plan to wipe at least all red apples, if for nothing more than to remove the dust. Apples which are allowed to go into a sweat before wiping are very difficult to manage, as the coating of spray becomes gummy and cemented to the skin. A pair of cheap cotton gloves is much superior to a rag for wiping, as the operation is not only more quickly performed, but the hands do not become numb handling the cold fruit. Wiping and grading may be conveniently done at one operation.

If more than eight boxes in one hundred have to be culled out by the packers, an extra charge is made. Complete elimination of seconds and culls is of course highly essential to a first-class pack; nor is it so wasteful a process as some growers might think, but will often be found actually to be a measure of economy. Suppose, for instance, a man finds he has apples enough to pack 100 boxes if he is easy on the culling, but that rigid grading will give him only 80. To choose the latter course may seem like a sheer waste of 20 boxes, but when he figures up the extra expense of packing the larger number, together with the lower price the ill-graded fruit brings, it will not take any special revival service to convert him to belief in the former course. The account might read something like this:

FIGURE NINE—THREE TIER, FOUR TIER, AND OFF-SET PACKS, UNWRAPPED

CULLED TO 80 BOXES.

RECEIPTS.

80 boxes apples at $1.00	$80.00	
20 boxes seconds and culls at 30c	6.00	$86.00

DISBURSEMENTS.

80 box shooks at 10c	$ 8.00	
Making 80 boxes at 1½c	1.20	
Packing 80 boxes apples at 5c	4.00	
Freight on 80 boxes at 30c	24.00	37.20
Net profit		$48.80

CULLED TO 100 BOXES.

RECEIPTS.

100 boxes apples at 75c		$75.00

DISBURSEMENTS.

100 box shooks at 10c	$10.00	
Making 100 boxes at 1½c	1.50	
Packing 100 boxes apples at 5c	5.00	
Freight on 100 boxes at 30c	30.00	46.50
Net profit		$28.50

These are conservative figures, and the difference in profit is apt to be more rather than less. Poorly graded apples are often difficult to sell at any price, but carefully sorted and packed fruit seldom goes begging.

Paying by the day would probably, under wise management, produce a better pack than by the piece, since the latter method to some extent puts a premium on haste and carelessness. It would be difficult, however, to arrange a just scale of prices under the day system, and some growers always lose money by this arrangement because they are not ready when the packers arrive, or have no conveniences or comfortable

quarters for them. This last objection proved so serious in the union at Hood River that paying by the day had to be given up, though at orchards where adequate preparations for the packers had been made the expense of packing a box was found to be only four and five-eighths cents. Packers must be trained to the business, and seldom become really expert until the second or third season. Not every one can become a first-class packer, as it requires a naturally quick hand and good eye for size. Beginners should not expect to get more than half wages the first season.

FIGURE TWENTY-TWO—ANOTHER ORCHARD PACKING SCENE

STYLES OF PACKS

There are a large number of styles of packing apples, varying with the taste and caprice of individual growers, but only a few of them are worth attention here. Perhaps the simplest is the adaptation of the old barrel pack of the East, in which the bottom and top are faced, the apples in the middle being simply poured in. It is a slovenly, not to say deceitful pack, requiring no grading except to sort out the big ones for facing. Fortunately it is seldom used, and then mostly for inferior fruit that is too small and low priced to justify anything better.

Of the better class of packs, in which each apple is put individually into place, the three sorts most commonly in use may be designated as the "straight," "diagonal," and "offset." The straight, or square, pack is made up of rows running straight across the box and presents perhaps the neatest appearance of any, but at the same time is severest on the fruit, as each apple is squarely opposed to its neighbors, instead of slipping into the recesses between them as in the other styles. It may be put up in three ways, as the size of the apples requires, which are called from the number of layers and rows in a box the three-tier (Figure 9), four-tier (Figure 10), and five-tier pack (Figure 12). A six-tier pack is of course possible, but no one in the West cares to bother to pack such small stuff. The number of apples in the box in each of these straight packs may be varied considerably, but reliable men of long experience in the business assure me that no other numbers than those mentioned below are necessary if the fruit is carefully graded. All apples that can not be put readily into one of these will go into one of the diagonal packs and much confusion be avoided. These are the figures:

The three-tier pack (the largest apples packed) should contain 45 apples to the box (5 tiers long) or 54 (6 tiers long).

The four-tier pack should contain 96 (6 tiers long), 112 (7 tiers long), 128 (8 tiers long), or 144 (9 tiers long). The 144 is seldom used, but is occasionally necessary with very flat apples like the Wagener.

The five-tier pack should contain 200 (8 tiers long). This is the smallest apple that most growers care to pack, though occasionally one puts up 250 (10 tiers long).

It is one of the pretty points about the box package that the exact number of apples contained is always known, and, if stamped on the box, as it should be, gives information much appreciated by the buyer.

The "diagonal pack" (also variously called the "pear," "orange" and "diamond," though these names are more properly applicable to the "offset" pack) is so called from the diagonal or oblique course taken by the rows. It is used for sizes intermediate between those suitable for the straight packs, and by some growers for all apples as far as possible which are wrapped. It should be used in preference to the straight pack whenever practicable, since the opposing of apples to spaces in successive layers protects them from bruises better than the straight style. Only two kinds of the diagonal pack are commonly used, the three-and-one-half and four-and-one-half tier, so named from the number of apples required to reach across the box. The former will go 64, 72 or 80 apples to the box; the latter 150 or 175. No other numbers are necessary or desirable.

The "offset" or "orange" pack (Figure 9, at right) is similar to the diagonal—in fact may be considered the diagonal with the rows running lengthwise (Figure 9, box at right).

THE OPERATION OF PACKING

A few years ago the crop of potatoes in the East was immense. Colorado, as usual, had raised many thousands of sacks, but found the price so low that it would scarcely cover the freight charges. In this emergency "the man of the hour" appeared in the person of a grower who packed his potatoes carefully, put them

up in neat ten-pound sacks with an attractive label, and sent them on to Chicago. A fancy price was asked, but the stuff went off with a rush, and netted the grower the highest returns he had ever received. Cases similar to this are known to most farmers. Very often the manner in which fruit or vegetables are put up has more influence on the price than quality itself. Some of the details given below as essential to a first-class pack will seem to many needlessly elaborate, or merely fussy, but there is plenty of experience to show that they all pay handsomely. It is a little easier and cheaper not to line the boxes, use early papers, or wrap the fruit, yet trifles like these make perfection—and fat pocket books.

FIGURE FIFTEEN—PROFILE OF TWO PACKS, SHOWING PROPER CROWN

The first item in a perfect pack is a clean box. As cooking recipes in old books sometimes quaintly begin—"Take a clean sauce pan," so the directions for packing apples might appropriately begin with—"Take a clean box." Get nice white box material and keep it clean. After placing the box upon the supports at the side of the packing table, which permit it to incline conveniently toward the packer (Figure 18), the lining paper is put in. Lining papers are of cheap, soft stock, in width slightly less than the length of the box, and about 26 inches long. One sheet is required for each side, the two overlapping generously in the bottom of the box, enough being left outside to fold over the top (Figures 7 and 18). To prevent tearing along the bottom corners when the bottom bulges, a plait is folded into each sheet about six inches from the end. Packers do this very deftly by catching the paper at the edges so as to turn a fold into it, and crease it by drawing it swiftly across the knee. The plaits lie along the corners and provide plenty of slack. Next a "layer paper," consisting of a piece of thin but soft and spongy cardboard just the size of the box, is laid in the bottom. Then hang the paper hod on the edge of the box, if the apples are to be wrapped, and you are ready to put in the first layer of fruit. The construction of the hod for holding wrapping papers may be readily seen from Figure 7. Two right-angled hooks in the edge engage the edge of the box, and a bracket beneath supports it against the side. It is by far the most convenient device for the purpose. To assist in picking up the papers, packers usually wear a rubber finger stall on the thumb or first finger. Practice enables them to wrap the fruit very rapidly. An apple is picked up in one hand while the other reaches for a paper (Figure 19, packer at left) the two are slapped together, as it were, and with a single dexterous twist the loose edges are gathered into a little bunch over the stem. It seems to take scarcely longer to wrap the fruit than to place it in the box unwrapped, so quick and continuous is the motion of wrapping and depositing in the box. Papers 10x10 inches are adequate for all but the largest apples. Frequently growers stamp their name on the wrappers, thus advertising it more surely, since middlemen sometimes paste their own box label over that of the producer. Many deem it unnecessary to wrap, and for many local markets it doubtless is, but for the Eastern and export trade it is all but indispensable. The wrappers make effective cushions, help to retain the aroma of the fruit if stored, and take up slack in case of shrinkage. They also impress the buyer with the fact that extra care has been given the product, and hence attract the best trade. The advisability of using layer papers is more open to question. They are not at present in very general use. California growers look upon them with disfavor, but at Hood River they are in universal use. In Washington they are seldom used. In the diagonal and offset packs they make an admirable springy cushion for each apple, as is well shown in the middle box in Figure 5, from which the side has been removed. In the straight packs this advantage disappears, but as an absorbent and in preventing the spread of decay the layer papers are highly effective, especially when wrappers are not used. The manner of putting up the straight pack is too obvious to need much description, though the judgment to know whether the apples on the table will go best into this or one of the diagonal packs is something that must be gained by experience. The apples may of course be graded so closely beforehand that each lot will pack into one size and style, but this is laborious and unnecessary with skillful packers, who from a large table choose swiftly and almost instinctively the right size. The apples should fit very snugly, yet if an apple at the end of a row has to be crowded in by main strength, either the packer has a poor eye for size or did not choose the right pack to begin with. Let him spare the grower the anguish of seeing a fine apple crowded down against the side of the box till the skin slips.

FIGURE SIXTEEN—SIDE VIEW OF BOXES AFTER NAILING, SHOWING PROPER BULGE IN TOP AND BOTTOM

The way to start the diagonal pack is clearly shown in Figures 5 and 7. It becomes still simpler by packing the box from the side, as some do, for then it resolves itself into the offset pack of each row alternating with, or offsetting, its neighbors; but it is much more convenient to work at the end of the box in all styles of packs. The box at the left in Figure 5 shows how to begin a layer of the three-and-one-half-tier pack. The two apples in the left hand corner are first placed diagonally across it, then one snugly in the right hand corner, and a fourth above and at the left of this wedges all securely into place. Then follow two more apples, as in Figure 7, and the layer has advanced far enough so that any one can finish it. In the middle layer two apples were placed across the right instead of the left hand corner, while the bottom layer is identical with the top as shown, hence each apple in each layer comes opposite a space in the adjacent layer. When finished the box should present the appearance shown by the one at the right in Figure 5. The four-and-one-half-tier pack is started by placing an apple in each lower corner and one in the middle; two are then pushed down as far as they will go on either side of the middle apple, and followed by three more apples, corresponding in

position to the first three, and so on until the layer is completely finished.

The offset pack is so simple that no description is necessary. The apples of the second layer should alternate with those of the first, that is, the first apple will be placed in the lower right hand corner, bringing it over the vacancy left by the bottom layer.

There is still one important feature of a good pack that has not been mentioned, and that is the crown or bulge in the center. This is a bugbear for the beginner, as it is difficult to make the end rows come flush with the ends of the box, or slightly above them, and yet have the center about an inch and a half higher. To secure a proper crown it is often necessary to turn part of the apples in the middle layer, or layers, flatwise, if being packed on cheek, or vice versa, yet skillful selection of the larger apples for the center will usually make this unnecessary. In the case of very large apples it is sometimes impossible to bring them low enough at the ends, as in the box at the right in Figure 15, and then it becomes necessary to lay a cleat at each end under the cover. Frequent resort to this, however, is strong evidence of faulty packing, and is not permitted by most growers. The box at the left is properly crowned. A crown of an inch and a half gives a bulge at top and bottom, when the cover is nailed on, of three-quarter of an inch, which experience has shown to be about right (Figure 16). A greater bulge means too severe pressure on the fruit; a less, too great danger of its becoming slack. In a properly packed box the apples in each layer should be so snugly fitted into each place that when the hand is placed upon them and an attempt made to move them back and forth, there should be no perceptible slackness. Yet if there is no bulge, an otherwise perfect pack soon becomes slack from handling and shrinkage.

Two essentials of a perfect pack are honesty and uniformity—that is, the apples in the middle or bottom of such a pack are just as good as those on top, and all perfect; all are of an even size and properly colored; and every box is packed with the same degree of care and skill, so that the buyer may feel certain that it is a case of "one seen, all seen." Too rapid work is frequently responsible for faulty packing, especially where the oversight is not thorough. It is reported from some places that packers put up more than 100 boxes per day, but it is safe to say that even the most expert can not put up more than 75 perfect boxes in ten hours, and very few can do more than 50 well. The latter figure means good wages to the packer. Ease and dispatch in packing are much conditioned by the preliminary arrangements. If the equipment is good and everything convenient, the results will be far more satisfactory to all concerned. Attractive labels shown in Figure 23 add much to the appearance of the boxes, and are a valuable means of advertising and building up a special trade. Whether labeled or not, however, the box should be marked on the end with the name of the variety, the number of apples contained, and the grade, especially if the latter is anything but "first." At Hood River they add to these marks the name and number of the grower, the number of the packer, and the number of the inspector. Under-colored fruit is also marked "L" for "Light." Each packer is assigned a number for the season and provided with a stamp with which he stamps it on each box as completed. He also marks with pencil the number of apples in the box to guide the foreman, who does the rest of the stamping. Under this system faults are easily traceable to the committer, and incompetents weeded out. The inspection of the foreman is a check on the packers, and one on the foreman may be had by the grower opening a few boxes out of every hundred at random; or in case of a fruit union, this may be done upon delivery at the warehouse.

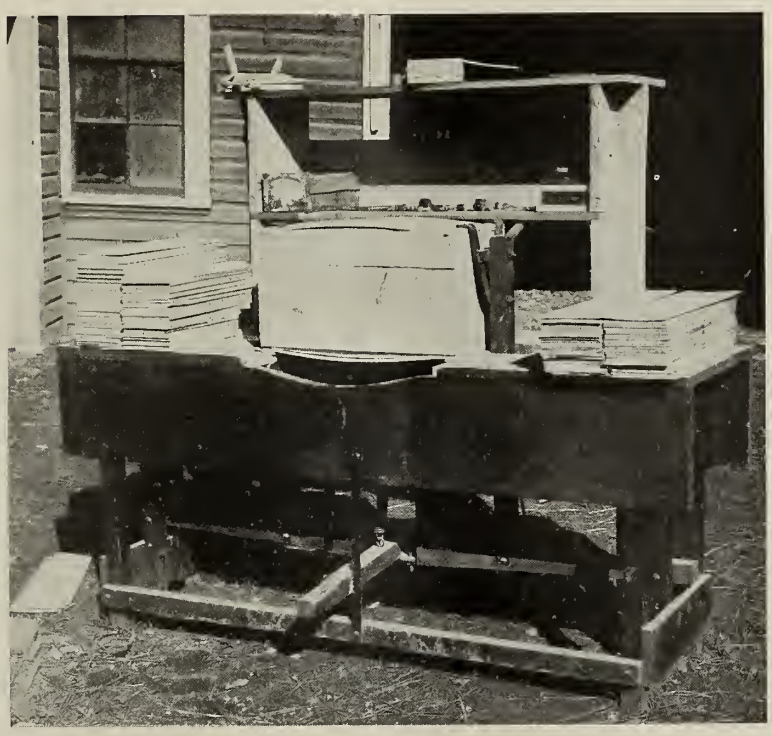

FIGURE SEVENTEEN—NAILING PRESS, BEST TYPE

The marking of fruit packages is a proper subject for legislation. Not till false or misleading marking is visited with a legal penalty and the law enforced by rigid inspection, will the honest packer and the consumer be properly protected. Such a law, known the the Fruit Marks Act, has been in successful operation in Canada some four years. Every grower should work for such a law in this country.

In piling and hauling the boxes care should be taken always to lay them upon their sides, as the bulge in top and bottom allows the fruit to be easily bruised if piled upon the latter. This precaution is especially important when loading into cars.

Considerable labor is involved in loading a car. Free circulation about the boxes, together with perfect immobility, must be secured. Figure 23 shows how this is accomplished. A row of boxes is laid across the car with a space of several inches between each, and strips reaching to the sides of the car nailed along front and back edges, thus securing every box against any sidewise motion, and also providing an air space between this row and the one above. A generous space should be left at the top of the car where the warm air gathers; six rows high is quite enough for the ordinary car and many prefer to make but five. When the car has been filled to the door from either end, it must be braced against the severe endwise thrusts incident to frequent stopping, starting and switching. Two-by-fours make the best material for this bracing. Uprights are stood in front of each tier of boxes on either side, and nailed lightly in place; across these three pieces are nailed, one on the floor, one near the top, and one in the middle. Braces are then cut just a little too long to fit between opposite cross pieces, driven home with a maul, and securely nailed. Four or five braces are thus wedged into place between each pair of cross pieces, holding every box in place as in a vise. A car will hold about 600 boxes.

THE APPLE: FROM NURSERY TO PACKING TABLE

AN ADDRESS DELIVERED BY A. I. MASON, Horticulturist, of Hood River, Oregon, at the Meetings of Fruit Growers Held in the Rogue River Valley, Southern Oregon, September, 1906

I HAVE been requested by Brother Withycombe to tell you how to put first-class, high-grade apples upon the packing table ready for market, and then my colleague, Brother E. H. Shepard, will tell you how to handle them in order to receive the greatest profit. If it were possible for Brother Shepard and I to do all that Brother Withycombe has requested us to do, our mission on earth, in a horticultural sense, would be complete, and it could truly be said, "Well done, thou good and faithful servants." The duty assigned to me covers a field of thought which is so broad, and embodies so many topics, upon any one of which a good-sized paper could be written, that it will be necessary for me to touch only briefly upon the principal topics and some of their most important details; and whatever views I might express shall be limited to those obtained by personal experience and observation during the last ten years while growing an apple orchard in Hood River Valley. And I shall ask you to make all necessary allowance for our soil, climate, and market conditions, which may be entirely different from your local conditions.

The first thought in the mind of a prospective fruit grower is to select his location. Now, we Hood River people when away from home are rather timid in regard to our solicitations; and would say to the prospective horticulturists, if there is not room for you in Hood River, by all means go to Rogue River. The next duty for a prospective horticulturist is to determine what varieties are best adapted to his locality considering soil, climate and market conditions. Before you plant an apple orchard, you should know just what varieties will reach the highest excellency in your district, and return to growers the greatest profit. Don't make the common mistake of planting too many varieties in a commercial orchard. One variety, if it is a self-pollenizer, may be more profitable than a half dozen mixed varieties. Under no circumstances would I advise the planting of more than two or three varieties in any commercial apple orchard. In my orchards I have just two varieties, the Esopus Spitzenberg and Yellow Newtown.

Now, I know some one in this audience is thinking of that much-talked of pollenizer. But do you know that pollenization, relative to the apple industry, is yet in its infancy? Don't fly off on a pollenization tangent until you know you are revolving upon a plane of scientific investigation upon which you can safely alight. Our experiment stations have told us that the Yellow Newtown does not need a pollenizer; and they may yet be able to tell us what high grade, profitable, commercial apple may be planted with the Esopus Spitzenberg in order to obtain a successful pollenizer. After you have decided upon the two or three varieties to plant in your commercial orchard, go to the nursery and select your trees in the fall as soon as they are ready to lift. Do your own selecting, if it is possible for you to do so. It will pay.

Don't buy anything but the strongest, healthiest, and most vigorous one-year-old tree that you can find in the nursery, even if it costs you twice as much as a small, stunted and inferior tree. Crown gall and hairy-rooted trees may not be objectionable in the eyes of some nurserymen, but I would never advise the planting of them. I know a fruit grower in our valley who went to a nursery last fall and took with him his hired man and a wash tub, and the roots of every tree that he bought were washed in a tub of water before his inspection. This treatment rejected at least 15 per cent of the trees. Did it pay? Don't ask a nurseryman, but ask any progressive fruit grower.

Before you plant an apple orchard, the soil should be cultivated until it is in the best possible condition. There are several systems for laying out and planting an apple orchard, but I prefer the hexagonal, for several reasons, among which I will mention but the two most important. First, it gives a more equal distribution of trees over the ground. Second, it gives a better opportunity for thorough cultivation and spraying. It has been truly said that you cannot dig a tree hole too deep or too broad. Twenty inches deep and thirty-six inches across is about the average size of holes dug before planting the apple tree in our valley.

FIGURE EIGHTEEN—GOOD STYLE OF PACKING TABLE

When you plant an apple tree, be sure to set it so the main roots will be at least six inches below the top of soil. Go into any old orchard and you will find many trees were set entirely too shallow. The roots near the trees are either bare or so shallow that the cultivating instruments are constantly damaging them.

My experience has taught me that if soil is in good condition during late fall or early winter, then is the best time to set a tree. The first season's growth of a tree set in the fall will be far greater than when set in the spring. The distance apart to set trees varies with local conditions. In our valley they should be set at least twenty-eight to thirty feet apart; while in the Willamette Valley they should not be less than thirty-five to forty feet apart. The lower altitude, their longer growing season and extreme moisture produce a much heavier wood growth, and I might add, a later bearing tree. I believe in deep and thorough cultivation. You cannot plow your orchards too deep while trees are young. I have plowed my orchards twice, when trees were small, to a depth of sixteen inches, by using a subsoil plow, and I have every reason to believe it was a paying investment of both labor and money. Fellow fruit growers, I am ready to defend this assertion, that any apple orchard, in any country, and under any climatic conditions, should have clean and thorough cultivation during the summer months. Cover crops are very beneficial and almost indispensable; but during the fall and spring is the only time to grow them.

Give the trees the benefit of all nutrition and moisture contained in the soil while the fruit is growing.

It has been said that cleanliness is next to godliness. So it is with the apple orchard. Cleanliness will do much good toward retarding the growth of fungi, the spread of insect pests, or the encroachment of many orchard diseases. Old dead weeds around the trees, props left lying on the ground, or standing under the limbs all winter, old birdsnests in the trees, and the ground covered with wormy and diseased apples, all go to tell me that such conditions are detrimental to the best interests of successful horticulture. It is very necessary and beneficial to give the bodies of your apple trees a general annual cleaning during the early part of spring. The loose, rough bark should be scraped off, and the old wounds cleaned out and thoroughly waxed. And right here I want to advise you to stop using paint, or anything other than good grafting wax on any wound on an apple tree. Saw off a large limb, paint the wound, and one year afterwards you will find the outer part of the wound looks all right; but upon investigation you will find that dry rot has begun about one quarter of an inch under surface of wood. If the same wood had been covered with good grafting wax, it would have been in a state of almost perfect preservation. To make a good grafting wax, melt together four pounds of resin, two pounds of beeswax, and one pound of tallow. Before using, thin with turpentine. This wax can be used when cold. After the bodies of trees are thoroughly cleaned and wounds waxed, I deem it advisable to give them a cover of whitewash. Now, don't imagine for a moment that this will stop up all pores of the bark and forever ruin your trees, as many people advocate. One week after the wash is applied it is more porous than the bark. I have experimented for the last five years upon the making of this wash; and while the following formula may be improved upon, yet it is the best of all that I have ever used. Dissolve one pound of resin with one pound of concentrated lye. Add to this ten pounds of lime just after you have slacked it. Then add enough water to make paste suitable for whitewash, after which add one quart of flour made into good starch.

This wash will clean the bodies of trees of all fungi growth or insect pests. It will protect your trees from extreme heat of the sun, hence avoiding any sunscalded trees. And it will lessen the evaporation of sap while passing from the roots to the top.

If you should be so unfortunate as to get some trees untrue to name, or make

a mistake in your judgment when you first set your orchard, and finally discover that you have an orchard of undesirable and unprofitable trees, don't wait for years before you change them but do it at once. If your trees are not strong bodied dig them up and set others; but if they have strong, healthy and vigorous bodies, by all means graft them. I prefer the side graft. A split graft leaves a decayed place in the tree. The budding does not make so strong a union as a side graft. Don't let some one make you believe it does not pay to graft, that you had better dig out the objectionable trees and set in new ones.

I have in my orchard over seven hundred grafted trees, which are just as pretty as the picture I will show you. But don't imagine that you can stick the grafts into the trees and have no further trouble. It takes constant care and attention to grow a well - balanced top upon a grafted stalk; but you will be well paid for all your trouble. My experience in changing trees has been limited to those from one to eight years old, and I would not ask for better success.

The cultivation of an apple orchard while the trees are small is easily managed; but after the trees have become older and larger, it requires different instruments in order to do thorough cultivation, especially in a low topped orchard. I discard the use of the plow in my orchards after they are six years old, and thereafter use the disc. The plow lifts and tears the roots, leaving them very ragged, and oftentimes exposed to the sun. It also leaves a wound very susceptible to crown gall.

The disc harrow cuts the roots smoothly, and leaves all injured roots in a splendid condition for immediate new growth. But do I hear some one saying, "You cannot go deep enough with a disc harrow." Ah! my brother, I believe in deep cultivation, but if you will weight your disc harrow and put on some extra horse power you can surely get it. All cultivating instruments to be used in working an old orchard must be very wide in order to be successful. Here is my list of instruments: An eighteen-inch disc that cuts five feet, but may be extended to thirteen feet; a three-section smoothing harrow that covers thirteen feet; a home-made leveler that covers twelve feet; a two-section clod smasher that covers twelve feet; a spring-tooth harrow that covers five and one-half feet, but may be extended to eleven feet; and a New Kimball Orchard Weeder, fourteen feet wide, which cuts only four feet on each end, and leaves a six foot space in the middle. This space is cut out afterwards with an eight-foot Kimball Weeder.

With these sized implements, you will have but little space left around the trees to cultivate with a hoe. I desire to add here that the Kimball Weeder is the best dry weather instrument I ever saw. It absolutely cuts and lifts all the dirt, letting it drop back without exposing any moisture to the sun. As a weed killer, it is unexcelled. In our climate we try to keep a dust mulch in our orchards from three to four inches deep during our summer months. If there is any part of orcharding upon which I am an enthusiast, it is cultivating and pruning. When I was a boy I was taught that a good corn grower never waited for weeds to grow before he repeated the cultivation. Just so in cultivating an apple orchard. Keep the molecules of earth loosened and you prevent the penetration of the sun's rays, the loss of moisture from your soil, and literally instill vigor and life into your trees.

A few days ago I passed through a young orchard (and I am ashamed to admit it was in our own valley) which caused me to wonder why some people could expect success. The trees were one year old when set last spring. They had been topped from three to three and a half feet high, so the sap during our hot days could have time to become almost boiling hot, and to lose a large per cent by evaporation before it finally reached the top where it had forced out a small, sickly growth from two to six inches long. The weeds were quite numerous, and had thrived all summer. In fact, they had been cultivated a little at one time, if I am not mistaken, and the moisture of the soil—well! I guessed that it was somewhere below for I could not find it. I stood and gazed, and said to myself, "Is this man crazy?" The answer came back, "No, he just hasn't time." Fellow fruit growers, I hope Rogue River has no such orchardists. But I expect you have. If so, I don't believe he is here today, for he hadn't time to come. But when you meet him, try to impress this thought upon his mind, that the orchardist who hasn't time to do his work well should change his vocation at once to something where thoroughness in every detail is not so essential.

Of all the duties that have been forced upon me since I began growing an apple orchard, that of pruning has been the greatest problem for me to solve. And if I should differ radically upon this point from many of you, just pass this part of my paper into the waste basket until you have time to come to Hood River and visit my orchards.

Mr. Chairman, I want to be put on record as being unalterably in favor of a low-topped and hollow - centered tree. Also as a firm believer in using the pruning shears diligently and intelligently until I get a tree which can produce and support fairly well its own fruit. In other words, I believe in getting a tree first, and fruit will surely follow. But if you permit a young tree to grow with but little pruning and bear heavily while young, you will never have as large, strong, vigorous and prolific a tree when it becomes old. I top my one-year-old trees when I set them, from eighteen to twenty inches high, always cutting top so terminal bud will be toward the wind. About July 15 of the first year I prune out my trees so as to leave from three to four upright stalks as near in a circular shape as possible. I then cut back these upright stalks to about eight or ten inches. This summer pruning prevents the trees from getting top heavy, and forces them to grow a more stalky body, and also gives them at close of season an advanced growth in the desired shape of top. The following spring I cut out all inside growth, but do not top. In fact, I believe that it is necessary to have two pruning seasons —one during the winter and spring, to thin out all undesirable growth, the other during the latter half of July to cut back all extra long growth.

The successful apple grower must study the nature of every variety of tree in his orchard, in order to become a practical pruner. I find that the Yellow Newtown should be cut back but very

FIGURE TWENTY-THREE—MANNER OF PACKING BOXES IN A CAR

little after it has entered its third year's growth. But I cannot grow an Esopus Spitzenberg so as to make it carry its fruit well, and maintain a strong and shapely tree without topping it almost every second summer. I presume some of you want to know why I prefer a hollow-centered tree. Here are some of my reasons: First, it gives more light and air into the center of the tree where the fruit most needs it to obtain high color and better keeping qualities. Second, it gives more room to get into the center of the tree to thin, pick and spray the fruit. Third, it gives a perfect system of uprights, when properly fastened together, to which all other limbs can be fastened, hence making a top far stronger than any other system of supporting the tree when loaded with fruit.

I feel as though it would be time wasted for me to state the many reasons why I prefer a low-topped tree. Such reasons as convenience in thinning, spraying, and picking the fruit; in protecting the body of the tree from extreme changes of heat and cold, and the protection of both tree and fruit from being damaged by heavy winds. All these reasons, and many more, are so plain that I wonder why any progressive fruit grower would ever think of growing a high-topped tree.

The subject of spraying is one of much interest to every apple grower, and one upon which a whole volume could be written. However, I shall only make a few general suggestions. This part of orchard work, more than any other, demands extreme thoroughness in every detail. If you spray, do it well or not at all. A poor job of spraying is labor and money wasted.

A few weeks ago I received a letter of inquiry asking my opinion upon the following questions, which were to be read at the Pacific Coast Nurserymen's Association, held in Tacoma, Wash. First, can an orchard badly infested with San Jose scale be given one thorough spraying with the proper remedies and be entirely eradicated of all scale? Second, has not the time arrived when it is advisable that every orchardist in the Northwest should spray for San Jose scale every season? My answer to these questions, briefly told, was this: First, it might be possible, but hardly probable, that one spraying would eradicate all scale. Second, every orchardist should spray with the sulphur and lime spray, or something equally as effective, every spring, just before the buds open, and those who do not and will not should be made to by strict enforcement of strong horticultural laws.

For several years I have sprayed with sulphur and lime late in the spring, just before the buds opened, and as far as I know I have never had a scale in my orchards. In this respect, I believe in the old adage, an ounce of prevention is worth a pound of cure.

A few days ago I received another letter, this time from the editor of the Spokesman-Review at Spokane, Washington, asking for my opinion upon the criticisms made against the fruit inspector at Salem, Oregon, because he condemned some peaches which were slightly affected with the San Jose scale. His letter closed with this very important question: "Is it practicable to allow the growers any leeway in this respect?" Here is my answer in short: Thorough, diligent and intelligent spraying will practically eradicate the San Jose scale. It is easier to control in our valley than the codlin moth. No leeway should be given. It would be absolutely impossible to frame a law giving any leeway in selling diseased fruit, which would give satisfaction to either the producer or consumer. It would be greatly abused by the growers, and would ever be a source of trouble for the fruit inspectors.

I have used several formulas for mixing sprays with which to exterminate the green aphis, but I find that one pound of whale oil soap and one pound of quassia chips to eight gallons of water gives the best results.

For fighting the codlin moth, most all apple growers in our valley are now using the arsenate of lead sprays. We are well satisfied with the results, after two years' trial, and will look with suspicion at first upon any one who claims to have discovered a better spray. The advantages of this spray over the arsenate of lime or the Paris green sprays are many. It is less trouble to prepare. It remains in suspension much longer. There is absolutely no danger of burning the most delicate foliage or fruit. It harms neither man nor beast when applying it. It is much easier to apply. It flows through both pump and nozzle very smoothly and causes but little wear on either. It will not wash off easily by heavy rains, and yet when dry rubs off very easily. The labor saved in wiping the apples at picking time will more than pay the difference in the cost of spray. It requires a less number of sprayings, and gives better results in the destruction of the moth.

Most of us are trying to follow the advice of Prof. E. D. Ball of the Utah Experiment Station in fighting the codlin moth. However, I modify his advice a little in applying the first two sprays. Instead of waiting ten days between the first and second sprays, I do not believe we should wait longer than four days. If petals have mostly fallen when first spray has been applied, we cannot wait ten days to apply the second spray and find the calyx of the center apples in each cluster open, and it is these center apples which we mostly leave when thinning. I have sprayed with arsenate of lead six times this season. The dates are as follows: May 7, May 10, June 1, June 25, July 20 and August 20.

FIGURE NINETEEN—PACKERS WORKING AT TABLE. FOREMAN STANDS AT REAR BY CULL BOX

The first two sprays were made to fill the calyx end of the apple with poison. The next three sprays were to keep the outer part of the apple covered with poison while it was expanding with growth. The last spray was to give a farewell banquet to the second brood of moths.

I believe I wasted one spraying; the third, fourth and fifth sprayings should have been merged into two sprayings. But our climatic conditions last spring and early summer were such as to cause an uncertainty in just when to spray, and I would rather spray too often than not often enough. I have less than one-half of one per cent of wormy apples in my orchard this year. But this record cannot be expected every year. Owing to our late season cold, cloudy and rainy weather last spring, it seems that the first brood of moths was very light, most of them never hatching.

In regard to the most desirable power to use in an orchard for spraying, I would say it is a difficult question to decide. The carbonic gas, the gasoline engine and the small steam engine all have their friends, but I intend to purchase a small steam engine sprayer next spring. I believe it has many advantages over both the others. The principal one being the cost of operating. This is almost nothing compared to either of the other two. Its agitation is perfect, and

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the steam can be blown through every pipe, hence making it very convenient for cleaning purposes, especially when using our sulphur and vitriol sprays.

Now, I presume the most of you know all about thinning apples. However, I may be able to make a few suggestions. Thin absolutely to one apple on each fruit spur. If tree is too heavily loaded, leave no two apples closer than four inches apart. Do not forget to thin early; yes, very early, the earlier the better, if you want size to your fruit. The apples thin easier then than at any other time. No scissors or clippers are needed. Thinning early will force a larger growth into the remaining apples than if the whole cluster of five or seven remained on the same fruit spur until they were the size of walnuts.

Begin to thin when the apples are about the size of hazelnuts. This is just a few days after you should have applied your second spray. At this time they will snap off very easily at the outer end of stem. Some growers let their apples get as large as walnuts before they begin thinning. By this time the stem has become very tough, and will not break off easily at outer end, but will split off very easily at the base end. This they do, leaving the base of stem on remaining apple almost entirely surrounded with small scars or wounds. The growth of this apple must then be restricted until nature restores the injury. But some claim that the little stems left around the apple will scar it. This is only theory. On many varieties they will drop off entirely, but on the Esopus Spitzenberg many will remain all the season. For the last three years I have thinned all my apples by breaking them off at the outer end of the stem, and I have never found an injury caused by the remaining stems. It is only occasionally that one of them touches the apple, and if it should it is so small and weak that it can do no injury.

I feel as though this paper would not be complete if I did not say something about propping and tying up apple trees when too heavily loaded with fruit. I discarded all tree props in my nine-year-old orchard last season. Some of my neighbors said, "You can get along all right this season when the crop is very light, but wait until you get a heavy crop." Well, I have a heavy crop this year, and still have no props, and as far as I can see, I am all right yet. It sounds nice for an orchardist to tell you that he prunes and thins until his trees will carry all their fruit. I don't do that, and I doubt if many do in our valley. However, I believe in heavy pruning until I get a tree with a large, strong, and well balanced top, and a short, stout body. But with all of these precautions the apple tree in our valley will bear entirely too heavily especially while young.

This being true, many limbs which are too heavily loaded must be supported by some artificial device. As previously stated, I grow nothing but a hollow centered tree. The main upright stalks, which are generally from five to seven in number, are fastened together about ten or twelve feet from the ground with screw eyes and No. 12 galvanized iron wire. I also use a three-quarter inch galvanized harness ring in center of tree, to which all wires from main stalks are fastened. When this is done once, it is done for all time, during the life of the tree. I then have a structure perfect in shape, and unexcelled in strength. To this structure, which is a cylinder of limbs from three to four feet in diameter I tie up with strong twine all other limbs that are too heavily loaded with fruit.

I might add that out of four different kinds of twine that I have used this season in tying up apple trees, I find that American spun, two ply, tarred hemp is the best and the cheapest in the end. The labor in tying up a tree is the greatest expense. This tarred hemp will last at least three years, after which the limb is either strong enough to carry its load or large enough to receive the screw eye and wire. After my trees are supported as above described, it seems almost unnecessary to state the advantages over the old method of using props. The trees will remain in a better shape; fruit will be more uniform in color; no risk of wind blowing down props, hence causing limbs to break. A less per cent of fruit will be limb rubbed or blown off. You will have no props to interfere with cultivation, no props to rub off half the bark where it comes in contact with the limb. And there will be no props to haul in and out of your orchard each year. I might add under this topic that the best method of tying two limbs together is to encircle both limbs within one loop. This will require more twine, but will always retain the limbs as desired, and will not imbed itself into the bark of tree so badly. The swaying of limb with wind will keep it loose, and as soon as the fruit is removed, the twine and bark will be loosened or entirely separated. This system of building and supporting a tree is rather difficult to explain on paper so I will now illustrate it with a model tree I have brought with me. I also have with me some photographs of trees heavily loaded with fruit, which show them carrying their burden and yet remaining upright and shapely.

In picking your apples you should be careful in every detail. Pick all apples as soon as they have attained their proper size, color, and maturity. Do not pull

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off the fruit spurs, thereby destroying next season's crop. See that your pickers do not bruise the apples. Handle them as if they were eggs. I do not like the common practice of picking apples in a bag tied over the shoulders or around the waist. Every move of the body moves the apples in the bag. Every time you lean against a limb, or come down the ladder and let the sack strike against the steps you are bruising the apples. While these bruises are small and may not be noticeable to you, yet the cold storage commission man at the other end of the line will discover something is wrong. Your apples will not keep well, and hence will not give satisfaction. The next season he will seek other fields in which to buy, or worse yet, offer a much lower price for your fruit.

It is a very common practice to pick apples into the same boxes in which they are to be shipped. If this must be done, do not let your boxes sit on the ground. Keep them clean. A better way is to use only the regular orchard picking boxes.

I use a little skeleton table, twenty-eight inches high, with the top just the size of an apple or orchard box. Upon this table I set the box while picking from the lower limbs. With low topped trees, at least one-third or one-half of the fruit can be picked while standing on the ground, and be placed in the box on this table. They are light, easy made, and very convenient. It saves your back from stooping over to place the apples in the boxes, and it saves the re-handling of your fruit from the picking basket, bucket, or bag. I find that a galvanized iron bucket, made to order, ten inches wide and ten inches deep with straight sides and a hook attached to the handle, is very convenient for picking apples. I have experimented with several different styles of patent step ladders, but nine times out of ten the picker will take the ladder that sets the most solid upon the ground. This is generally a common, home-made step ladder, with three or four legs, made so as not to fold together. These ladders are practical only when not over seven or eight feet high, and when used in working around the outer part of trees.

For thinning and picking the top and inner part of trees, I find nothing so convenient as two tripod ladders set on opposite sides of the tree, with a light and strong plank laid through the tree, with ends resting upon the top or the rounds on inner ladder of each tripod ladder. I have with me a photograph of these ladders in service, which I will take pleasure in showing to you after this meeting is over. You will notice that this is another point scored in favor of an open topped tree. These ladders could not be connected very conveniently with this plank if the tree contained large center limbs; and besides, you could not get into the tree to work with any convenience.

In thinning and picking off of these ladders in my orchards, three persons can and do work with perfect ease and safety. When you pick your apples, do not throw any culls on the ground in order that you may have the opportunity to get down on our knees in the dirt and mud a month later to pick them up. When I pick a tree, I leave the ground beneath it, as well as the tree, clean of all fruit, it matters not how badly damaged. After your apples are picked, do not store them away before wiping. After an apple sweats, it will cost twice as much to wipe it. Especially the Esopus Spitzenberg. I have wiped them when they cost me ten cents a box, just because I had let them set awhile after picking. The best contrivance that I have found for wiping apples is mittens made of Turkish toweling. Lay your hand on the cloth and mark around it leaving one-half inch for seam, cut to mark and then stitch up on sewing machine. It will take about five minutes to make a pair of these mittens. If you will try them, you will always use them. Each wiper should have two or three pair. While wiping your apples, be sure to cull out all wormy, scaly, scabby, bruised, misshapen, or otherwise imperfect apples. This is a good time to separate your seconds from the culls. It is just as easy to place a cull apple where it belongs as it is to throw it in a box where all are mixed together. I believe I am now ready to put my apples upon the packing table, and if my colleague, Brother Shepard, does not get me the best price ever paid for apples anywhere in the world, I shall be greatly disappointed in his ability as manager of two of the best fruit growers' unions on the Pacific Coast.

In conclusion, I desire to say there are many other topics, such as cover crops, fertilization, irrigation, drainage, other orchard pests, and diseases, all pertaining to the growing of the apple. But time, and your patience forbids me to continue longer. If there is any part of my paper that you desire to have explained more fully, I shall be pleased to do so at any time to suit your convenience.

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GROWING BETTER NURSERY STOCK AND PRUNING APPLE, PEACH AND OTHER STOCK

By W. T. HOOD, Proprietor
Old Dominion Nurseries—Richmond, Va.

TO grow good nursery stock you should have good land, and use good stocks to propagate on, and you should keep them in good condition until planted, and plant early in the season. I have made more failures by late planting of apple grafts than by any other reason.

I have the best success with apple grafts at our place when they have not been grafted too long before they are planted, and generally our last grafting does the best, and if I could have it done I would prefer not to graft until after the middle of February, and have them planted out in March, though we do not usually commence to graft until about the middle of January, and very often do not get them planted until after the first to middle of April; this season we did not finish until about the twentieth of April.

To make a good apple tree at two years, we should get as strong growth the first year as possible, and the sooner they start in the Spring the better, and I think make larger trees the first season; all trees that make a growth of thirty inches in height the first season will make good trees at two years, and most of them should be three-fourths and up, six and seven feet. After planting apple we try to keep well cultivated the first season, and after they have made most of their growth we cut off all forked limbs, or where they have grown out double, and after they have done growing we cut all side limbs off, and head before they start all to 34 inches that have made that growth, and after they have started to grow we rub the sprouts off about the bottom in height from six to twelve inches according to sizes, being careful not to rub much off of the weak and slender varieties, and as soon as the trees have made their first growth, say about the middle of June, we commence to prune up, pruning those that are large enough, up as high as you wish, and take very little off of those that have not thickened up, and then you can go over a second time, the second pruning three or four weeks later than the first.

Pear, cherry and plum that are coming two years you should treat the same as apple. Peaches you should commence to prune as soon as they have made a growth of two and a half to three feet, which will be about the first of June at Richmond, and prune up about six to twelve inches, according to size, and then you can cut out all forked ones, or those that the disbudding insect have caused the tops to stop growing, and side shoots that have started out near the top; the best leader should be left to grow, and all the others should be cut or pinched out; the second pruning should be made as soon as you can, say about the middle of July, or as soon after as you can get it done, at which time the trees should, at least most of them, be as large as you need them, and then should be pruned up to two to two and a half feet that are large enough. If you have a very wet season, as we have had during this July, peach will make a very heavy growth and many of them will get too large, and in that case you can keep pruned up very high as it will help them from getting too stocky.

Plums and cherry that are expected to make trees at one year should be treated about the same as peaches.

Visits that I have made at the Western nurseries in going and returning from the Dallas, Texas, convention many of them are doing a great deal of pinching out of one-year stock of peaches, cherry and plums, and I think that some of them were injuring some of the trees by too much of it, as it caused trees very often to become top-heavy and not thickening up enough, and it caused crooked trees which have to be staked. I used to do a great deal of pinching out, but do very little now.

If one does pinch out they should commence as soon as the bud commences to put out side branches and get over them as soon as you can, and then start back again and keep up until they have been pinched out twelve to eighteen inches; where you have boy labor it is the best to do that kind of work.

Pinching out is done to get trees up as fast as possible early in the season, and may be a help with peach where they are likely to be injured with the disbudding insect, for if you can get a straight stem on peach of about three feet I do not think the effect of this insect will be very bad—but you run the risk of doing too much and will have crooked trees from the effect of it unless you will stake them up, which I see the nurseries I visited are doing very much of, some of them staking all of their plum and many of their peach—some were using wire cut to about forty inches, others using laths, and others a stout stake about forty inches long. I think it a very good idea to use stakes, especially with plum, which blow off very badly if much windy weather, and it is a great help to trees that grow as the Snead peach.

I noticed that the nurseries mostly rubbed up stock that they expect to have two-year heads very high, and I think from that cause will have many light trees that would otherwise make three-quarter trees amongst their apple, but they seem to think not, as they stated their trees put on late growth and thickened up late in the season, but the best apple trees I saw was in northwestern Iowa and they were grown from grafts and buds. The buds were coming two-year this fall. They had not been rubbed up, but had been gone over then and pruned up about twelve inches. The apple grafts would be three-year this fall, but with two-year top and three-year roots they were all cut down to ground at one year and let every thing grow one year longer, not cutting off any

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of the forks which would be one, two, three and four as they started out. The nurseryman that was doing this said that he would get as good or better growth where all were left growing than if he took all off but one, and that he had plenty of good graft wood to use and to sell, and they showed me where those that were making several shoots was as good or better than those that had only one, and they stated that they made better roots, so were stronger to push up a fine tree the next season, and that they had very little work outside of cultivating that season. I also noticed that theirs were much better than those I saw in nurseries two hundred miles south of them, which were cut down at one year, where they were leaving one grow and it was getting bunchy as buds very often do where there is no pinching out. Pinching should be done as soon as the tree commences to start out side limbs, being careful not to pull off the leaves; if left until they get a little hard are likely to tear the bark which will make the tree have some roughness; also rubbing down should be done before the sprouts get too long so as not to tear the bark, and in apple should be gone over the second time as some varieties are later starting out than others. I think I have made better shade trees by not using the knife too much, and not doing much pruning until the tree stock up, except to take out forks. Where trees are quite close and in good ground, such as Carolina poplar, will shed off the lower limbs without any pruning. The best time to do much pruning in maples is after they start to bud out, and then do no more than what really has to be done, and then along in June or July do most of the pruning—when they are large enough to be headed it should be done before they have pushed, or have pushed very little.

In pruning one should learn first to use the knife so as not to make the cut too large, most all trees have a small shoulder where the limbs come out from the bodies, and if the knife is set too close in cutting it off will make a large wound; if the knife is set a little out and the cut is made toward the tree, being careful, however, not to cut the tree above the limb, the cut will make a small wound.

In learning, a pruner should be shown how to make the cut, though we have men sometimes that we cannot teach, they will either cut too close, or, if they cut in toward the tree, will cut the tree above.

THE GRAPE IN OREGON

By W. K. NEWELL

SOME seven or eight years ago we succeeded in stopping the importation of the Concord grape from New York and Ohio. It was customary to ship in two cars of New York grapes to Seattle and other places in a like degree until about 1898, when we succeeded in stopping that and now Oregon and Washington produce enough Concords for home consumption, at least. We also import less grapes from California, but I think we might do better and supply Oregon, both by growing the California varieties of grapes and by growing more, or enough, of our American grapes which, to my idea, are better eating than the Tokay, or people use more of them, and not buy so much of the California product. Mr. Coolidge, of Lane county, has said that Oregon, in his opinion, is one of the best countries on earth for grapes. We can produce the European varieties and the more commonly known California varieties right alongside of the native American varieties, while in California they cannot grow the native American grape at all, and in New York and Ohio, along Lake Erie, they cannot grow the European varieties, but right here in Oregon we can grow both to perfection.

Last summer at the Fair there was certainly a great object lesson for our people on the question of grape growing. The finest Tokays that were exhibited anywhere at the Fair from California, Idaho or anywhere else, came from Southern Oregon—the Oregon Tokays, one of the most popular of the European varieties and certainly the finest there.

I do not, however advocate the growing of European varieties in the Willamette Valley, although a great many have made a success in growing Black Hamburgs, some Muscats, and a great number of Sweetwaters have been grown and some Tokays. But the Willamette Valley should grow the larger and better varieties of American grapes and let Eastern and Southern Oregon produce the other kinds, as they require more heat and sunshine than the American varieties.

The grape grower wants to pick out a hillside location of some kind. Of course the grape will grow over a wide section and succeed, but to make a commercial success you want to get the best location you can. No one need be barred out of grape culture for home location, but if you are going to grow on a commercial scale an elevation of two hundred to three hundred feet is advisable, and on a southern slope, if you can. If you cannot get this then choose the next best locality. The soil must be well drained about the roots. Any of the soil that produces good fir trees and maple brush is good land for grapes. It does not need to be particularly rich; the grape vine is inclined to make too much wood instead of too little.

I will speak more particularly about the Willamette Valley grapes, as that is the section in which I have had the most experience.

In planting, I would plant four-fifths Concord then some Sweetwater for the

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first early grape. I find the markets here requires a blue or black grape rather than the red, white, or green; the white and green are very much at a discount. Moore's Early is another of the best early grapes, so far as I have tried them, coming in three or four weeks ahead of the Concord. Then for a white grape, the Niagara, or Moore's Diamond; for a red grape the Delaware, Brighton, or Catawba. The greatest trouble with Moore's Early is that it is in most localities a light bearer and the bunches are often imperfect. The Worden is a fine variety, but if there are heavy rains in September they are apt to crack badly and fall off the stems, and anyone who is going to grow many grapes for shipment don't want to go too heavy into Wordens.

In planting, set them out seven or eight feet apart in a row—if not set too closely they are more easily cultivated. It has always been the custom to train American grapes on a trellis, the European not. And it is always best to follow those lines as they have become adapted to that method of handling. Cut your yearling vine back to two buds to start with the first season and let the two grow a little while until they become well enough grown so they will not be easily broken off. When the bud first starts out it is very tender. Let them grow until they are a foot long, keep the vine tied to a stake and let it grow the first season. The second season if the vine has made a good thrifty growth cut it back to sixteen or eighteen inches from the ground and train on a wire trellis. I use cedar posts and run the top wire four feet from the ground, the bottom wire two feet, then spread your vine, making the head of the vine come just under the lower wire.

It must be remembered that the fruit is grown on the new wood, the new shoots that come out of last year's wood, that is, it is the year-old wood that produces the fruit. If other shoots bear, in rare instances, the fruit is small and inferior. By this system of providing new wood each year, renewing the vine each year, you will have plenty of new wood to produce the grape. You have got to be providing, always a year ahead, for spurs to grow your wood next year. There always wants to be a spur at the base of the fruit-bearing branch growing for next year. In this way you will always have new wood and your vine will be kept up indefinitely. A thrifty young shoot from the bottom may be trained to take the place of the original vine which may, if desired, be cut back to the ground. With a little care a vine can be kept bearing in this way many years. Do not allow your vines to bear too much.

Summer pruning is to be followed to some extent. After the grapes set, say about the tenth or fifteenth of June, go over your trellis and pinch off the ends of the vines rather than let them get too long. Then about the middle of July go over them the second time and pinch off the suckers that have started. This is about all the summer pruning you will need to do.

It used to be thought here in Oregon that it was necessary to cut out the leaves to let the sunlight get to the grapes. That is a mistake. Grapes will ripen the same as other fruit and the leaves should be left on to feed the grapes. We always find the first ripe grapes among the leaves, close to the ground.

In regard to marketing: the trade of Oregon demands the American variety of grapes and to be put up in baskets. The other kind, the European grapes, are put up in crates of twenty to twenty-four pounds, four of those little square, four-pound boxes in a crate. Concords are always expected to be handled in four to eight-pound boxes.

When it comes to picking grapes, they want to be picked when dry. Never pick grapes with the dew on. If you want to pick them and eat them from the vine at this time, alright, but never pick them for the market when they are wet. I never pick at home, even in the best weather, before nine o'clock; we can gather them then to pack during the day.

Unlike strawberries or other fruits, it is better to let grapes stand twenty-four hours before shipping. They pack firmer and do not crack in handling.

I think it will extend our market for grapes very largely when we can ship in carloads, so we can ship them a distance without its costing us all they are worth. For instance, there is a great demand in Seattle at certain seasons for grapes, but in shipping from this valley we would be up against an express rate of $1.10 to send them there, which means ten cents on a pound basket. We have to pay the express company by actual weight, and they are sold by the basket, not by the pound. In carload lots they might be laid down there at a few cents a basket. I have nothing further to offer.

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WHAT THE NORTHWESTERN FRUIT GROWERS ARE DOING

THE Puyallup and Sumner Fruit Growers Association shows a photograph of a check received from the cannery for $7935.29, which indicates the amount received by the Association from the cannery for berries delivered in one week. The Association comments as follows: This check should be an object lesson to the people of the Puyallup Valley. The raspberries for which this check was given would have been an absolute loss had we been without the cannery. After deducting the cost of picking these berries, it leaves more than enough money to entirely pay for every dollar expended in building the present plant, which cost something more than $4,000.00. In other words, during one week of our berry season the cannery plant marketed enough soft and unsalable berries to more than pay its original cost; and this was only one week's business. We can certainly no longer ask the question, "Does the cannery pay?"

THE Wenatchee Canning Company is putting up immense quantities of pears, apples and peaches. Anything that is not in perfect condition to be shipped abroad by the Wenatchee Association is turned into the cannery. This method insures good prices for fruit shipped abroad, and saves all the fruit that is overripe, which if shipped might be a complete loss.

THE La Grande Fruit Growers Association, but recently organized, we believe has made a very wise selection in electing E. Z. Carbine as manager. They certainly grow fine fruit in La Grande, but in past years have not secured the prices for the fruit that we believe they were entitled to. We might add that this is also usually true where there is no association and each grower markets his own fruit. Through the organization of this union, and under the able management of Mr. Carbine, there is no doubt in our minds that the growers of Grand Ronde Valley will realize better prices in the future than they ever have in the past.

GRANTS PASS, Southern Oregon, has organized a union under the name of the Grants Pass Fruit Growers Association, and elected Mr. Eisman as manager. Mr. Eisman is one of the Eisman Bros., owners of a large orchard in that locality, a man of good business ability who thoroughly understands the fruit business. Without a doubt the growers in this famous district in future will put up a fine class of fruit, and by getting together will realize fancier prices in the future than they have in the past.

A VERY thorough inspection by the fruit inspectors in Portland and Seattle is accomplishing great good. From general reports we are led to believe that California has been allowed to dump her infested fruit upon our markets and pull down our own price. We are glad that proper inspection is being made all along the line, and diseased fruit being dumped. Only object lessons like this will stop diseased fruit being put on the market.

WALLA WALLA, which is quite a good sized city, by the way, has a movement on in the interest of clean fruit, and is also endeavoring to establish a city market place where farmers can haul in their produce and dispose of it. It seems a good move, and will be of great benefit to the orchardists, and provide a means of their disposing locally of a great deal of their ripe fruit at a good profit.

THE Webber-Bussell Company cannery, of North Yakima, has opened up for the season, and now has at work a large force, taking care of the immense quantities of fruit being received daily. On August 22 nine cars were shipped out of Yakima. Nearly all were mixed cars, containing peaches, pears and apples. Yakima produces fine fruit, and a great many varieties, being celebrated particularly for its peaches, pears and apples.

HOOD RIVER, Oregon, will hold its bi-ennial fair October 11 and 12. The growers are making great preparations to outdo each other at this exhibition.

FRUIT FACTS

Chelan County won 35 gold medals on fruit at the Portland Exposition. This record was not equaled by any county on the Pacific Coast.
Shipments last year aggregated 1,000 cars. We will have more this year and still more next.
Fruit noted for flavor and keeping qualities. No worms.
We will have fifty cars of fancy Spitzenbergs and Newtowns this season.
Eighty per cent of fruit raised in Wenatchee, Entiat and Columbia Valleys will be shipped by the

WENATCHEE VALLEY
FRUIT GROWERS' ASSOCIATION
Headquarters at Wenatchee, the Big Red Apple Metropolis

P. M. HALL-LEWIS & CO.

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Make surveys, plans and estimates for sewer, light and power and railway plants, and furnish, subject to approval, plans, specifications, and estimates for all classes of buildings—public, private and mercantile. Special attention given to economic and slow-burning construction. Accuracy and economy guaranteed.

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AND AGRICULTURAL
IMPLEMENTS

THE BEST OF
ORCHARD & GARDEN TOOLS
A SPECIALTY

J. R. NICKELSEN
HOOD RIVER, OREGON

MILWAUKIE NURSERIES

N. B. HARVEY, Proprietor

I have a good stock of Apple, Pear, Plum, Prune, Peach and Cherry Trees for the trade this coming season. Have a large lot of Yellow Newtown and Spitzenberg Apple Trees in one and two-year-olds. Also a good general variety of nursery stock of all kinds. All my Apple Scions are cut from some of the best-bearing orchards in Hood River Valley, and my trees are true to name. *Call on or address*

N. B. HARVEY
MILWAUKIE, OREGON

YAKIMA COUNTY HORTICULTURAL UNION
E. E. SAMSON, MANAGER
NORTH YAKIMA, WASH.
GROWERS AND SHIPPERS OF
FRUITS AND PRODUCE
BERRIES, CHERRIES, APRICOTS, PEACHES, PEARS, PLUMS, PRUNES, CANTALOUPES AND APPLES
EXPRESS SHIPMENTS OF CHERRIES START ABOUT JUNE 1
MIXED FRUIT IN CAR-LOAD LOTS ABOUT JULY 20
WE USE REVISED ECONOMY CODE

I. GRATTON, President — C. C. WOODCOCK, Vice-President — S. B. COBB, Secretary
STANDARD BOX & LUMBER CO.
FIR AND SPRUCE
LUMBER
RUSTIC FLOORING AND CEILING
SPRUCE SIDING AND SHELVING
BOXES of all kinds MADE TO ORDER
Office and Mill Corner Pine and East Water Streets
PORTLAND, OREGON

HYDRAULIC PRESS MANUFACTURING CO.
MOUNT GILEAD · OHIO
Write for catalogue and prices to
CHARLES DAVIDSON, HOOD RIVER, OREGON
Read what a man says who is using one
Hood River, Oregon, July 31, 1906.
The Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
Gentlemen: For twenty-five years I was engaged in the cider making business in Illinois, and used all of the up-to-date screw presses. I am gratified to say that none of them gave anything like the satisfaction the Hydraulic Press and outfit does that I bought of your Company last year (1905) through your representative, Mr. Charles Davidson, of this place (Hood River, Oregon).
CHARLES DAVIDSON, HOOD RIVER, OREGON
I find your Hydraulic Press very much superior in every respect to the old-fashioned screw presses. They are so much quicker and easier to operate, besides producing a greater yield of cider. I believe I can make good wages repressing pomace after any screw press I have ever seen; in short, our press does the work perfect and rapid. Yours truly, M. L. EMERY & SON.

OLDEST LIVERY COMPANY IN THE VALLEY
TRANSFER & LIVERY CO.
Special Attention to Commercial Men, Camping & Fishing Parties
TELEPHONE MAIN 131
HOOD RIVER, OREGON

The Hood River Electric Light, Power and Water Co.
DOING A GENERAL ELECTRIC LIGHT AND POWER BUSINESS
CITY WATER WORKS SYSTEM FOR DOMESTIC AND MUNICIPAL USE. ARE PREPARED TO FURNISH EITHER ELECTRIC OR WATER, AT REASONABLE RATES
TWENTY-FOUR HOUR SERVICE
3000 HORSE POWER
GENERAL OFFICE, HOOD RIVER, OREGON

FOREST GROVE, Oregon, reports that orchardists in that district are waking up and that the orchard work in the way of spraying and cultivation this year has been very thorough. We regret to state that the Willamette Valley for some time has had the name of being not quite as thorough as it should be; but whether that is a fact or not, we are glad to learn that they now have the reputation of being wide awake.

VARIOUS reports from different sections of the country lead us to believe that there is a new destructive insect making its appearance, that was first discovered on the blackberry in different localities, and a great many seem to think that it is the boll weevil of the South. It would be wise for everybody to be on the lookout in order to prevent this insect, whatever it may be, from getting a start.

A SHIPMENT of grapes was made from Portland for Vladivostock, and packed in kegs, being completely enveloped in sawdust. Spain ships grapes to America packed in kegs and uses ground cork. These grapes arrive late in the winter, and can be kept as late as April. The cork absolutely prevents them from rotting. It is claimed the sawdust will do the same. It is to be hoped that this shipment will turn out satisfactory.

IT is stated that Walla Walla has shipped a carload of prunes to England, and they were put up by the Blalock Fruit Company. It is to be hoped that this car will arrive in good condition and the results be satisfactory. If the results are good, prune growers will not be compelled to sell to canneries at whatever price the canneries may see fit to pay.

THE Broder Cannery, Bellingham, Washington, is now in operation, and is doing a large business. Canneries are one of the greatest helps to a fruit community, for the reason that whenever the market is off, or glutted, the surplus can be canned, and usually commands a good price in winter when fresh fruit is scarce.

THE Lewis and Clark Exhibition in Portland has apparently done a great deal of good, for the reason that it gave growers an opportunity to see fancy fruit from fruit districts that produce fancy fruit. It stimulated their pride, and the movement throughout the Northwest is very general for better fruit, which means better prices.

R. D. BANCROFT, of Elgin, we are informed intends to put up an evaporator. These evaporators, like canneries, are certainly great helps when markets become glutted, in taking care of the surplus. We hope that the time will soon come when every fruit district will have both a cannery and an evaporator.

THE Puyallup and Sumner Fruit Growers Association has now a membership of five hundred and three.

FROM some districts it is learned that the blackberry is being attacked by anthragnose. We have not seen any of the blackberry patches so affected. However, if such is the case, we believe that spraying with bordeaux at the right time will exterminate this disease in the same manner as the apple anthragnose is cured.

ALL through the Willamette Valley and Roseburg the prune crop is considered to be very large; in fact, some districts estimate this year's crop larger than any previous year. The prevailing prices offered are comparatively low, and a great many who are posted in the business are advising growers to hold out.

IN 1896 the apple crop amounted to 76,000,000 barrels. Eastern buyers are figuring out and telling us this year's crop will amount to 72,000,000 barrels. However, as early predictions are much larger than actual results, we are very much inclined to believe that the yield as usual is overestimated.

ON August 6 the Wenatchee Valley Fruit Growers Association shipped nine cars of fruit. When our districts get up to sending out nine cars per day, it certainly looks like business, and it is evident that the East desires fancy Western fruit.

When you get to Hood River stop at the
MT. HOOD HOTEL
Trains stop directly in front of Hotel. Bus meets all boats
Daily stages for Cloud Cap Inn during months of July, August and September

A. G. GOODRICH, of North Yamhill, Oregon, is getting his evaporator ready for business, and has added a number of improvements. We are glad to see this one improve. The more and better evaporators we have the better we are off to take care of the surplus crop and protect the grower at home.

NORTH YAKIMA advices indicate that the apple crop in that valley will amount to about 1200 carloads this year. The Yakima Valley is certainly entitled to the reputation it has already earned for producing fancy fruit, and doing it on a grand scale.

THE Rogue River Valley Fruit Growers Union, of Medford, is now shipping daily a carload of pears. Several other carloads have been shipped by large orchardists down there, among which may be mentioned the orchards of Voorhies & DeHart.

WALLA WALLA people show their enterprise by providing cold storage for all fruit that is being sent to the Fair for exhibition. By so doing they insure the fruit being in nice condition when exhibited in the Fair.

AROUND Ilwaco, Washington, they seem to be doing quite a business in a small way by growing late fall strawberries. There are quite a few small patches, and some growers realize as high as $6.00 a crate for these late berries.

FROM Everett we learn that it is reported that O. Callahan cleared a net profit of $600.00 an acre on raspberries. The raspberries around the Sound seem to bear very heavy; yields of 500 and 600 crates an acre are not unusual.

L. D. WEIST is using scientific methods in fruit culture, and from his efforts is to be expected that it won't be long before Bend, Oregon, will be recognized as one of the fruit localities of Oregon.

A CARLOAD of watermelons is going to the Orient from Portland. The melons were grown at The Dalles, and are to be packed in banana crates, surrounded with straw, each crate containing three melons.

REFRIGERATION rates from Southern Oregon are reduced from $77.50 to $50.00 per car to points as far east as Kansas City; far eastern points proportionately. This means considerable saving to the fruit grower.

THE first carload of blackberries from Puyallup sold in North Dakota for $960.00, and consisted of 504 crates, almost $2.00 a crate, which is good money for blackberries by wholesale.

J. G. HOSKINS, the fruit inspector at Seattle, reports that he has inspected 631 cars. From what we understand, he is doing excellent work.

REPORTS from Bellingham indicate that the fruit crop in that section this year is very high grade.

THE FIRST NATIONAL BANK
OF HOOD RIVER
CAPITAL $50,000.00 SURPLUS $12,000.00
EVERY FACILITY POSSIBLE FOR PROMPT AND SATISFACTORY HANDLING OF FRUIT BUSINESS

A MOVEMENT is on foot for a new cannery in Albany, Oregon. We sincerely hope the growers will take hold of this enterprise and get one started, the quicker the better.

A CARLOAD of Gravensteins was shipped from Hood River to go to Vladivostock. A shipment of this variety is now under way for London, consisting of three cars.

MR. F. A. HUNTLEY, State Inspector of Washington, is of the opinion that while the apple crop is large, Yakima, which grows fancy fruit, will command good prices.

THE Buckley Fruit Growers Association in the State of Washington is adding a new feature to its business by incorporating with the words "distillation of denaturalized alcohol."

THE Wallace orchard at Salem is one of the large orchards of the state, and we understand has seventy-five acres in pears and forty acres in apples. This orchard produces some fine fruit.

THE Grants Pass Fruit Growers Union, which was recently organized, made its first shipment to the East, consisting of a carload of pears.

YOUNG orchards around Irrigon, Oregon, are beginning to bear, and from what we have learned, this promises to be a fruit country in the near future.

Things we are Agents for
KNOX HATS
ALFRED BENJAMIN & CO.'S CLOTHING
DR. JAEGER UNDERWEAR
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311 Morrison Street, Portland, Oregon

WINTER AND SPRING
BLOOMING
BULBS
Hyacinths, Tulips, Narcissus, Crocus, Etc. Now is the time to plant. Send for our catalogue of Bulbs and Roses.
CLARKE BROS.
PORTLAND, OREGON

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The best local paper on the Columbia River between Portland and the eastern line of Oregon.
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CHERRIES, PEARS, PRUNES

Our cool climate produces firm, beautiful Apples, which, for long keeping, cannot be excelled, if equaled; in flavor second to none.

We guarantee every package to be just what is claimed for it.

GRAND RONDE VALLEY FRUIT GROWERS UNION

LA GRANDE, OREGON

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FURNISH YOUR

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WE carry a complete line of Furniture, Carpets and Stoves and would like to figure with you. Do not let the matter of money stand between you and a well-furnished home. The Powers credit system is at your service—a broad, liberal, dignified credit—that adapts itself to your circumstances. If you are about to furnish a home or are in need of any one article, let us know and we will tell you about our "dignified credit."

POWERS FURNITURE CO.

FIRST AND TAYLOR STREETS
PORTLAND, OREGON

EXTRACTS FROM LETTERS WE ARE RECEIVING

I will say to you that the reason I sent a subscription to "Better Fruit" was solely because I was very much taken with the get-up of the paper, and the marked high-grade tone of those several articles which were highly instructive to anyone interested in the horticultural industry, and exactly what we need to keep up with the rapidly moving procession of the horticultural world of these days. All of us are constantly experimenting and studying to find methods and means of bettering and improving our orchards and our products, and it is the duty of all to turn such information over to the orchard public. We receive much more than we can possibly give, and we should try, even in a small way, to discharge a part of the obligation. I shall be glad to do what I can for the good of "Better Fruit" and the orchard industry.—J. W. PERKINS, *Hill Crest Orchard, Medford, Oregon.*

I had much pleasure yesterday in spending an hour with No. 1 of "Better Fruit." It was like a visit to Oregon to see the pictures and read the articles appearing therein. I sincerely hope that "Better Fruit" can be kept up to the high standard that has been set for it, both as to its reading matter, which appeals to me as being intensely practical, and to its handsome typographical appearance. With kindly regards and best wishes, I am, yours truly.—A. L. CRAIG, *General Traffic Passenger Manager, St. Paul, Minnesota.*

I have read the sample copy of "Better Fruit," and I think such a paper should be supported by every fruit grower. I am taking several fruit journals now, so I am quite well supplied with bulk; but as Webster said, there is plenty of room at the top for quality, so when a paper cuts loose from everything and stands on quality first, last, and all the time, or die an honest death, such a paper shall have my support, and long may it live. —J. N. DODSON, *Cashmere, Washington.*

I have just examined No. 1, Vol. 1, of "Better Fruit." You have certainly maintained a high standard for Hood River in putting out a finished product, both in regard to appearance and quality. If you maintain the same standard for your paper, you certainly will find the same market for it in a literary way as you have for your fruit. Sincerely yours.—E. D. BALL, *Experiment Station, Logan, Utah.*

Herewith enclosed $1.50 for two copies subscriptions for your journal, "Better Fruit." I hope and wish you great success with your enterprise, to give the fruit growers of this region a journal of real merit, which I feel sure this will be. The article on spraying alone in your first number is worth one hundred times the subscription price.—J. GASTON, *Portland, Oregon.*

Your first copy of "Better Fruit" came to hand, and was glad to find it was newsy, clean, and a high-class paper; very interesting, indeed. I have talked with two men, whose names I furnished you for sample copies, and I am enclosing herewith $1.50 for their subscriptions.—E. S. WOLFERS, *Table Rock, Oregon.*

I want to say that I was very much pleased with the copy of "Better Fruit" that I received, and will enclose herewith money for one year's subscription for same. Wishing you every success with "Better Fruit," I am.—C. H. LEWIS, *Bear Creek Orchards, Bear Creek, Medford, Oregon.*

I am in receipt of your first issue of "Better Fruit," and must say it is highly creditable. May the high standard set be maintained, and success be yours.—E. R. LAKE, *Corvallis, Oregon.*

I will do my best to get our people interested in your paper, for I know that it is a good paper, and just the paper that all fruit growers should have.—J. A. PERRY, *Medford, Oregon.*

We are greatly pleased with your first edition of "Better Fruit." Fine in every way. Keep up the good work well begun.—PAGE & SON, *Portland, Oregon.*

I am very much pleased with the last issue of "Better Fruit," and feel that I cannot afford to do without it.—A. M. ASPINWALL, *Brooks, Oregon.*

Every advertisement in "Better Fruit" is reliable, when writing to any of them, please mention that you saw the advertisement in "Better Fruit."

LESLIE BUTLER, President
J. N. TEAL, Vice President
TRUMAN BUTLER, Cashier

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Incorporated 1905

Butler Banking Company

HOOD RIVER, OREGON

Capital Fully Paid $50,000

GROWTH OF DEPOSITS

April 4, 1901	$ 36,741.73	April 4, 1904	$140,866.60
April 4, 1902	69,530.57	April 4, 1905	160,031.71
April 4, 1903	128,481.75	April 4, 1906	281,042.83

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OF BIG, RED APPLES

WE ALWAYS HAVE SOME

CHOICE TRACTS TO OFFER

at popular prices and sell them strictly on their merits. Years of study given to Hood River and its products. Can sell you intelligently. Call on or address

Geo. D. Culbertson & Co.

Leading Land Agents *Hood River, Oregon*

Tobacco Dust FOR WOOLLY APHIS

Spring and Summer is the time to fight woolly aphis, and Tobacco Dust is the preparation to use in fighting it. Tobacco Dust is safe and effective, and is a valuable fertilizer for the trees as well. It is recommended by the Missouri Experiment Station and other authorities.

WE SELL TOBACCO DUST IN ANY QUANTITY

Send for circular quoting prices. Do this now, so the Tobacco Dust can be applied to your trees, and the rains will leach it down among the roots, killing the woolly aphis and fertilizing the trees for this season's growth.

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Also manufacturers of the Celebrated Anchor Brand Fertilizer

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Books on Fruit Culture and Farming

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A BOARDING and Day School for Boys. Manual Training, Military Discipline, College Preparation. Boys of any age admitted at any time.

WRITE FOR ILLUSTRATED CATALOGUE

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W. J. BAKER & Co.

Real Estate

Have Fruit Land for sale in Hood River, Mosier & White Salmon

HOOD RIVER, OREGON

COMMENT OF THE PRESS ON "BETTER FRUIT"

The Courier has received a copy of "Better Fruit," the latest venture in Oregon journalism. It is published at Hood River and is devoted strictly to the fruit industry, being in the fullest sense a technical publication that will deal with every phase of the fruit business from the growing of the nursery stock to the marketing of the fruit. Its publishers are E. H. Shepard and E. A. Franz, both Hood River fruit growers. Mr. Shepard is manager and secretary of the Hood River Fruit Growers Union and is a recognized authority in Oregon on all questions pertaining to growing and marketing fruit. Mr. Franz is a practical newspaper man and for several years past was one of the most successful growers of famous Hood River. The publishers plan to represent every section of the Northwest and to have contributors from all the fruit districts to furnish articles that will be of general interest. The paper will be illustrated with views pertaining to the fruit industry, the first number containing a large number of fine half-tone pictures. The subscription price is but $1, and as the paper will be practically a text book of reliable instruction in the raising and marketing of fruit, every grower should take it. Send a dime for a sample copy and see if it is not the best paper published dealing with the fruit industry of the Northwest.—*Rogue River Courier,* Grants Pass.

"Better Fruit" is an excellent monthly publication launched at Hood River in the interest of horticulture. As the name implies it is the intention of the publishers to teach the secrets of success in fruit growing, and to this end "quality" shall be the watchword. Hood River has long set the standard in the cultivation and marketing of apples and strawberries, and now two of the successful orchardists and berrymen of that section have begun the publication of a magazine devoted to the science which they have mastered. E. H. Shepard and E. A. Franz are editors and proprietors of the magazine which they have so appropriately named "Better Fruit." Mr. Shepard has for several years been manager of the Hood River Fruit Growers Union, a co-operative association which has handled several million dollars worth of fruit, the bulk of which has been sold in the markets of the East and in Europe, while Mr. Franz is a practical berry grower and a member of the governing board of the association. Hood River is more widely known than the name of the state in which it is located. "Better Fruit" ought therefore have no difficulty in attaining success. It has a fertile field.—*Lewiston Evening Teller.*

A friend has placed upon our exchange table a copy of the first issue of "Better Fruit," an elegantly printed 24-page monthly. "Better Fruit" claims to be published in the interest of up-to-date, progressive fruit growing and marketing, and a glance at its contents proves that it is carrying out its mission. We cite a few of the articles contained in this number: "Importance of Fruit Growers Associations," "Picking, Packing and Marketing the Peach," "Where Buyers Look for Fancy Fruit," "Methods of Combating the Codlin Moth," "The Marketing of the Strawberry Crop," etc. The journal is printed on heavy book paper, is illustrated with beautiful half-tone engravings, and, from a printer's view is hard to beat. It is in keeping hand with the high standard maintained by the Hood River orchardists on everything connected with their products.—*The Evening Pajaronian,* Watsonville, California.

Many favorable expressions are being heard about "Better Fruit," a paper published at Hood River. It is the only publication in America devoted exclusively to fruitgrowing, and is even more readable and interesting than it is unique. E. H. Shepard and E. A. Franz are the editors, and they are to be congratulated upon their success. The magazine is up to date and its aim is to assist the fruitgrowers in every detail of their business. It publishes all the latest and most approved methods and its articles come from men who are not only excellent writers, but who are practical fruit men and are thoroughly posted about all phases of the fruit business. This is one of the secrets of the success of "Better Fruit."—*Oregonian,* Portland.

"Better Fruit," Hood River's new fruit paper, has made its appearance. Like everything in the horticultural line sent out from Hood River, it is strictly first class. It is not a local publication, but has the world for its field and it is the intention of its publishers to make it the best publication issued anywhere devoted exclusively to fruit growing. The publishers are E. H. Shepard manager of the Hood River Apple Growers Union, and E. A. Franz, manager of the Hood River Fruit Growers (strawberry) Union. This paper will be especially strong in dealing with marketing problems. It is the best printed paper in Oregon, and its illustrations are worthy of the highest commendation.—*Oregon Agriculturist.*

"Better Fruit" is the name of a new publication to appear monthly at Hood River, Oregon, its editors being E. H. Shepard and E. A. Franz. The July number is neat in typographical appearance and contains interesting articles and illustrations along the line of up-to-date fruit growing and marketing.—*Pacific Homestead.*

The editor of this department acknowledges the receipt of a copy of a new paper entitled "Better Fruit," published by the Better Fruit Publishing Company of Hood River, Oregon. The editors and publishers are E. H. Shepard and E. A. Franz. The paper is filled with good matter and is well gotten up. The illustrations are good. In fact, the paper is to contain beautiful half-tones. We wish our neighbor abundant success and hope to have the paper on our exchange list.—*The Ranch,* Seattle, Washington.

FAMOUS HOOD RIVER

Strawberries

THE FINEST BERRY ON EARTH AND THE BEST SHIPPER

LOOK GOOD, BUT TASTE BETTER

Fancy Pack Guaranteed

FRUIT GROWERS UNION

HOOD RIVER, OREGON

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PRACTICAL ORCHARDISTS AND NURSERYMEN

GROWERS AND DEALERS IN HIGH GRADE NURSERY STOCK. SPECIAL ATTENTION GIVEN TO LAYING OFF, PLANTING AND CARING FOR YOUNG ORCHARDS. ESTIMATES FURNISHED.

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PACIFIC STATIONERY AND PRINTING CO.

PORTLAND, OREGON

EVERYTHING FOR THE OFFICE

LIST OF FRUIT GROWERS UNIONS AND HORTICULTURAL SOCIETIES

WE publish free in this column the name of any Fruit Growers organization or Horticultural Society, with the name of their secretary or manager. Secretaries and managers are requested to furnish particulars if omitted, for future publication.

Oregon

Oregon State Horticultural Society—E. R. Lake, Secretary, Corvallis.
Forest Grove Horticultural Society, Forest Grove—Col. Harry Haynes, Secretary.
Clackamas Horticultural Society—J. C. Zinzer, Secretary, Oregon City.
Mosier Horticultural Society—A. P. Batcham, Secretary, Mosier.
Medford Horticultural Society—L. B. Brown, Secretary, Medford.
Medford Fruit Growers Union—Medford.
Ashland Fruit and Produce Association.
Hood River Horticultural Society—J. L. Carter, Secretary, Hood River.
Marion County Horticultural Society—E. C. Armstrong, Secretary, Jefferson.
Linn County Horticultural Society—F. M. Mitchell, Secretary, Albany.
Polk County Horticultural Society—R. L. Chapman, Secretary, Dallas.

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People who have used them find it pays well. If we have not got just what you want, we can get it on short notice. Call and see us.
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Headquarters for
FARMING AND ORCHARD
TOOLS
Disc Harrow Extension for Orchard Cultivation a Specialty
When you want any kind of Orchard Tools come to me and get the BEST

THE BOSS
Tree Protector
MADE OF YUCCA PALM
Is cheap, durable and quickly put on the tree. It prevents rabbits from destroying your trees. Sure protection against frost, sunburn, grasshoppers or dry winds. Can be easily removed. Will last for years. Send for samples.
PRICES
10 in. long $ 8 00 per 1000
12 " " 9 00 " 1000
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16 " " 11 25 " 1000
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24 " " 15 00 " 1000
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All 7 Inches Wide
W. H. MARSHALL, Hood River, Oregon

Yamhill County Horticultural Association—W. H. Kingery, Secretary, McMinnville.
Grants Pass Fruit Growers Union—Chas. Meserve, Secretary, Grants Pass.
Hood River Fruit Growers Union—E. H. Shepard, Secretary and Manager, Hood River.
Hood River Apple Growers Union—E. H. Shepard, Manager, Hood River.
Grande Ronde Valley Fruit Growers Union, La Grande, Oregon—E. Z. Carbine, Secretary.

Idaho

Southern Idaho Fruit Shippers Association—C. J. Sincel, Secretary, Boise.
New Plymouth Fruit Growers Association—A. R. Ingalls, Representative, New Plymouth.

Washington

The Thurston County Horticultural Society—C. D. Sullivan, Secretary.
Waterville Horticultural Society—Ben Spear, Secretary, Waterville.
Yakima County Horticultural Society—E. E. Samson, Manager, North Yakima.
Kennewick Fruit Growers Association—W. S. Jenkins, Manager, Kennewick.
North Yakima Fruit Growers Union—M. N. Richards, President, North Yakima.
Spokane County Horticultural Society—L. G. Monroe, Secretary, Spokane.
Wenatchee Fruit Growers Union—Ed. M. Foy, Manager, Wenatchee.
Snohomish County Horticultural Association—C. L. Clemens, Secretary, Snohomish.
Puyallup and Sumner Fruit Growers Association—W. H. Paulhamus, Manager, Puyallup.
Vashon Island Fruit Growers Association—C. J. Prior, Secretary, Vashon.
Fruit Growers Association—Shelton, Mt. Vernon.
Spokane Fruit and Vegetable Growers Association—Spokane.
White Salmon Fruit Growers Union—Carl Ross, Manager.
Thurston County Fruit Growers Union—Fred W. Lewis, Secretary, Tumwater.
Bay Island Fruit Growers Association.
Whatcom County Fruit Growers Association—J. H. Kirkpatrick, President, Curtis.
Sultan Horticultural Society, Sultan—Thos. Musgrove, President.
Yakima Valley Fruit and Produce Growers Association—Granger, Wash.
Sunnyside Fruit Growers Association—Sunnyside.
Buckley Fruit Growers Association—J. B. Frost, President, Buckley.
Lewis River Fruit Growers Union—Woodland.

British Columbia

British Columbia Fruit Growers Association—W. J. Brandrick, Secretary, Landers.
Georgian Bay Fruit Growers Association, Ltd.—Thornbury, Antone, Canada.

Colorado Fruit Associations

San Juan Fruit and Produce Growers Association, Durango, Colorado, and Farmington, New Mexico—J. M. Kingsley, Manager.
Fremont County Fruit Growers Association, Canon City—J. P. Farmer, Manager.
Rocky Ford Melon Growers Association—A. C. Sloan, Secretary, Rocky Ford.
Plateau and Debeque Fruit, Honey and Produce Association, Debeque—H. A. Stroud, Manager.
Montrose Warehouse (shipper of fruit)—Robert Halley, Manager, Montrose.
Surface Creek Fruit Growers Association—Austin.
Longmont Produce Exchange—R. D. Jenkins, Manager, Longmont.
Manzanola Fruit Association—Ed McClain, Secretary, Manzanola.
Delta County Fruit Growers Association—Geo. Conklin, Manager, Delta.
Boulder County Fruit Growers Association—E. T. Carr, Manager, Boulder.
Fort Collins Beet Growers Association—Chas. R. Evans, Manager, Fort Collins.
La Junta Melon and Produce Company—J. O. Wood, Secretary, La Junta.
Rifle Fruit and Produce Association—Rifle.
North Fork Fruit Growers Association, Paonia, Colorado—W. H. Garvin, Manager.
Fruita Fruit and Produce Association—E. J. Dalton, Manager, Fruita.
Grand Junction Fruit Growers Association, Clifton, Palisade, Grand Junction—J. F. Moore, Manager.
Palisade Fruit Growers Association—Geo. Scroggins, Manager, Palisade.
Independent Fruit Growers Association—Grand Junction—Ferbrache, Manager.
Peach Growers Association, Palisade.

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E. H. SHEPARD, Manager,
Hood River Apple Growers Union.
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BETTER FRUIT
HOOD RIVER, OREGON

A Monthly Illustrated Magazine Published in the Interest of Up-to-date Progressive Fruit-Growing & Marketing

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E. H. SHEPARD AND E. A. FRANZ
EDITORS AND PUBLISHERS

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Better Fruit the Association Organ

A NUMBER of growers have written "Better Fruit" suggesting that it be made the Association organ. Therefore, we wish to say that one of the editors is not only manager of the Hood River Fruit Growers Union and the Hood River Apple Growers Union but also an orchardist and a large shipper. From our personal experience and the success attained in districts where associations are in operation under proper management, we believe no district can afford to be without its association, and we believe no fruit district will obtain the highest price for its growers, or get all that is coming to them where dependent solely upon the private firm. That this is true in reference to the association there can be no doubt in our mind, for the reason that the principle of the association is to obtain the highest price, which is returned to the grower, less the actual cost of handling. While, on the other hand, the principle of the private firm must neeessarily be similar to any other business, to buy as low as possible, sell for the best price obtainable, and make a good profit on the capital invested. However, competition is frequently remarked to be the life of trade; therefore, we are not opposed to the existence of the private firm where the association exists.

That associations are recognized as essential to the success of the fruit grower is forcibly evidenced by the great number in existence, Missouri alone having seventy, the rapidity with which they are being organized, the better prices realized through associations, and the prosperity of the individual growers in the districts where the associations exist, compared to districts without an association.

Associations & Horticultural Societies

BETTER FRUIT publishes a list of associations, unions, horticultural societies, with the name of the association or society, its post-office address, and the name of the manager or secretary, without charge, in every issue. We wish to have represented in this column every association and society in the Northwest, and therefore request the manager or secretary of every one to send full information along the lines above indicated. It is to the interest of every association and society to furnish this information, and of value for the reason that "Better Fruit" is sent to every Eastern firm operating in Western fruit; consequently "Better Fruit" will acquaint eaeh one of these firms with the existence of your association or society, and be a letter of introduction, so to speak, and possibly may secure for the association a new eustomer, or open up a new market. In substantiation of this statement, we would state that an ad. of the Hood River Apple Growers Union in the first issue of "Better Fruit" brought two new eustomers.

Better Fruit

OUR first number was "Better Fruit," the second number was "Better Fruit" the third number is "BETTER FRUIT," and so we will continue. Hundreds of congratulatory letters pour in, complimenting us on making good after the publication of the first number, and hoping the second would be equal to the first. We beg to assure our readers that "Better Fruit" will continue to be better. We have taken the initiative in publishing a paper devoted exclusively to commercial fruit growing. Our aim is to publish a clean, up-to-date fruit paper, containing the most approved methods and advanced ideas. That "Better Fruit" is beautiful typographically, that its half-tone color covers are handsome, that its advertisements are pure and reliable, none can deny. That it is the best all-round fruit paper published in America, is both universally and voluntarily conceded by our many letters of congratulation being received daily. That "Better Fruit" is original in name, conception, and every detail, is beyond question, and evidenced by every issue. We spent a year in preparation before our initial number, and spared neither time nor expense in producing not only the most beautiful, original and exclusive fruit paper published in America, but the best. All we ask is, if you find it interesting, valuable, or instructive, do your share in assisting to maintain "Better Fruit" by subscribing.

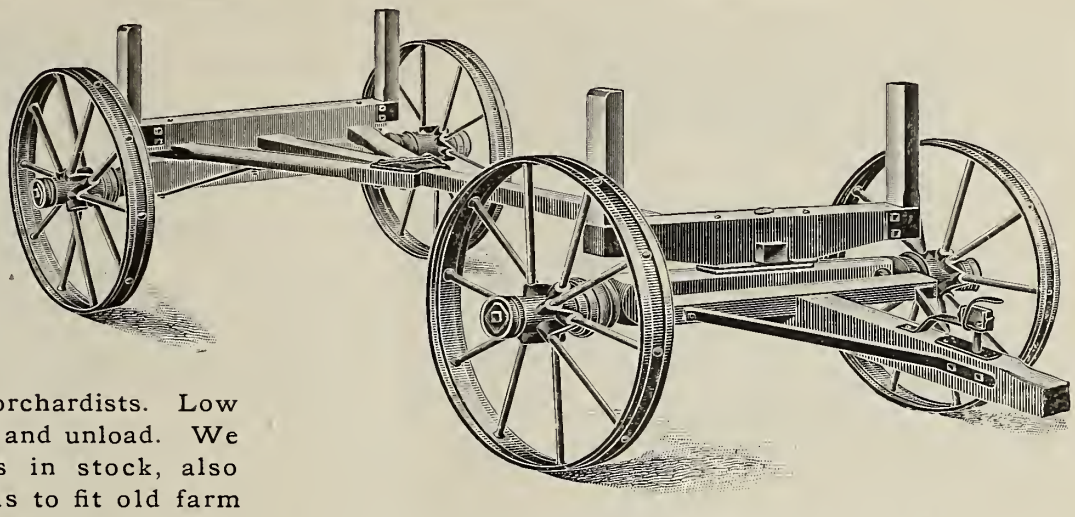
FRUIT growing is profitable and interesting. The life and business is so attractive that hundreds of professional men, business men, and successful tradesmen, are leaving the humdrum life of the city to engage in fruit growing. There is a craze on for city people to get away from the seven by nine office, furnace heat, and a back room without sunlight, and get back to nature. Orcharding is the life of a gentleman capable of intelligent labor, and we are fast returning to the ideal life. In England farming is the aristocratic profession of the nobility. Before the war the plantation was the ideal life of the Southern gentleman, and from the plantation came the greatest generals and the brightest statesmen. History is fast repeating itself, and now that hundreds of educated men, college men, business men and professional men, are engaged in fruit growing, and well posted in national affairs, it is our duty as fruit growers to select the most capable and ablest and place them in public office where representation is required in behalf of the fruit industry.

SOUTHERN OREGON is to be commended for taking the initiative in behalf of the fruit industry in securing the appointment of John D. Olwell on the board of trustees of the Agricultural College of Corvallis, and the election of J. W. Perkins to the State legislature. Both are able men, and orchardists. Fruit growing is one of the chief industries of Oregon, Washington and Idaho, and consequently entitled to public representation. In fact, the orchard industry is so great that we feel it is entitled to representation in every public body, and we believe it is the duty of every fruit grower to work entirely for such representation. We certainly are entitled to representation on the board of every agricultural college. What is more inconsistent than to see an agricultural college, of which one of the chief departments is agriculture, with a board of trustees composed of lawyers and politicians, without a single farmer or orchardist?

MR. W. H. PAULHAMUS is one of the largest fruit growers of Puyallup Valley, and also owner of a dairy that bears the reputation of being the model dairy on the Sound. As president and manager of the Puyallup and Sumner Association, he has done more to obtain better prices for growers, and increase the valuation of land than any other individual in that locality that we know of. Puyallup Valley is probably the greatest raspberry and blackberry shipping station in America. The fruit industry of the Northwest is so important, and the amount of capital invested so great, that we feel justified in requesting in behalf of this industry representation on the Interstate Commerce Commission. Inasmuch as fruit is of a perishable nature and requires the very quickest and best of transportation, I believe that we might safely say that no other industry needs representation so greatly as the fruit business. Mr. Paulhamus is recognized as a man of ability and force. He has made transportation and its laws a study. We therefore feel that he is thoroughly competent to fill a position on the Interstate Commerce Commission with satisfaetion to his constituents, and it is therefore our pleasure and honor to recommend him for such a position. We believe it is the duty of every fruit grower to work earnestly for his appointment. And we believe that every fruit grower should bring his influence to bear upon our representatives in Washington to secure this apopintment for Mr. Paulhamus. We are informed that the friends of Mr. Paulhamus in the State of Washington have been promised the support of Senator Piles. "Better Fruit" has taken the appointment up with Senator C. W. Fulton, and we feel justified in saying that these two senators will co-operate.

MR. A. S. FIELD, of Fitzgerald, Georgia, gives the following remedy for pear blight. Bore a small auger hole in the trunk of the diseased tree and insert fifteen grains of calomel to each tree, and then plug up the hole. It is claimed and proven by an experiment made by Mr. G. S. Smiley, who had trees badly affected with pear blight, in fact, considered them worthless, that after trying the remedy one year, the following year the trees were heavily loaded with bloom, and had apparently recovered their health.

No. 22 Farm Truck



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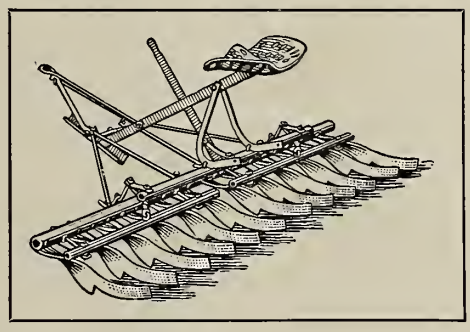

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9:12		BRIDAL VEIL		5:02
9:41		BONNEVILLE		4:32
9:53		CASCADE LOCKS		4:20
10:06		WYETH		4:06
10:33		HOOD RIVER		3:40
10:45		MOSIER		3:28
11:20		THE DALLES		3:00
11:59	*Arrive*	BIGGS	*Leave*	12:15

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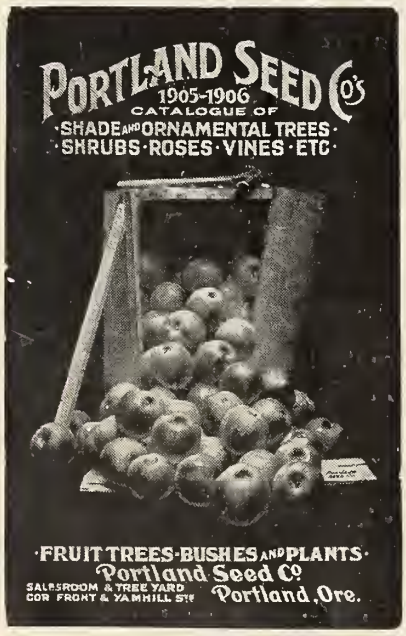

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